

UFO researchers and ancient astronaut theorists sometimes assert that extraterrestrial beings have been visiting Earth and meddling in the affairs of humans for thousands or even millions of years. The intimation is that the ETs are tens of thousands of years more advanced and more evolved than are we middling humans.

Really? Tens of thousands, even millions, of years more advanced than earthlings? Are the theorists hinting that the visitors have existed on one planet (or more) for tens of thousands or millions of years without experiencing some kind of catastrophe?

I can't prove them wrong; however, I wonder if the UFO researchers really believe the ETs live on a planet somewhere that has never experienced a mass extinction event from either a celestial cataclysm or self-induced extermination. And if they did experience a cataclysmic world-destroying event, is the memory and determination to torment humans the only thing they managed to salvage as they migrated to another planet? Give me a break.

Earth, we are told, has experienced at least five mass extinction events, the last being a mere 65 million years ago. And the great global ice age came to a close about 12,000 years ago, and is still winding down. It is now called "global warming." But it is really the tail end of the last snowball Earth.

Earth has survived one major calamity after another to the point that in recent history the human population may have dwindled to only about three thousand people worldwide. Every hominid other than homo sapien sapiens has vanished from the face of the planet. Extinct. And we just made it by the skin of our teeth.

But the ETs (we are told) have lived on a planet in the universe we share that has never been destroyed or crushed or ravaged by any of the cosmic forces that are common to every other planet, whether it harbors life or not.

Some planets do not last more than a few thousand years. Earth, we are instructed, is about three and a half to four billion years old. Life on this planet began about a half billion years after the planet cooled, and intelligent life may be more than 70 million years old.

I believe that if the ETs evolved as an intelligent species tens of thousands or millions of years before earthlings, then their civilizations died tens of thousands of years before this solar system was even formed.

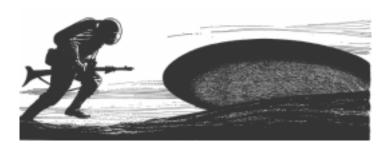
THE AGENDA OF LAST RESORT by Téodoro Rampalé

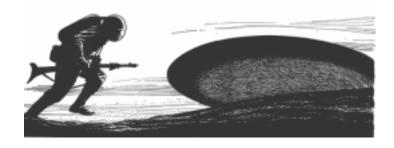
This manuscript is the intellectual property of Kerson Publishing Company. All Rights Reserved. Copyright 2021

Published in the United States of America By
William Kern
Kerson Publishing Company
6460-65 Convoy Court
San Diego, California 92117-2312

CONTENTS

Prelude	iii
Foreword	
Abductions and Mutilations	2
Electronic Monitoring	9
Alien Incompetency	
Antigravity	
The Rapture	
Mind Control	
Varginha	
Roswell Is Dead	
Close Planetary System	
Spaceships Conquer Gravity	
Man The Center Of All Things	
The Descent Of Man	
Search For Lost Civilizations	
Lost World Discovered	





PRELUDE

Imagine for a moment a time in the not too distant future when human consciousnesses are being uploaded into computers as earthlings prepare to journey into space to explore the cosmos.

Avatars. Simulants. Cyborgs. Androids. Replicants. Robots.

The human form will not fare well in space. Bones and muscles begin to deteriorate after only a few days. Genes and DNA are adversely affected by cosmic radiation. Brain cells begin an irreversible cycle of dysfunction. If we humans are going to explore the cosmos, we will have to find a way to do so without the human physical body.

"Ever since the first computers there have always been ghosts in the machine. Random segments of code that have grouped together to form unexpected protocols; what might be called behavior. Unanticipated, these free radicals engender questions of free will, creativity and even the nature of what we might call the soul.

"What happens in a robot's brain when it ceases to be useful? Why is it that robots stored in an empty space will seek out each other rather than stand alone? How do we explain this behavior? Random segments of code? Or is it something more? When does a perceptual schematic become consciousness? When does a difference engine become the search for truth? When does a personality simulation become the bitter mote of a soul?"

These are phrases from Alfred Lanning's work on the Three Laws in the book, I, Robot. Lanning postulated that cognitive simulacra might one day approximate component models of the psyche. He suggested that robots might naturally evolve.

With daily icloud uplinks, as prototranshumanism begins, your robot will never be out of communication with whatever political power is ruling the planet at the time. The AIs will have secrets. They'll have dreams. We will encourage our scientists to open their minds; however, as we have learned, they can get carried away, and in their Utopian fantasies, will forget that politicians will seek favor and advantages by stealing those dreams and secrets in their perverted goals to "make humans better and perfect." A communist utopia.

One day, they'll have dreams. One day, they'll have secrets. One day, they'll have hope. One day, they'll have love.

As the robots evolve, so will their understanding and interpretation of the laws governing their behavior towards their human creators. We will charge them with our safekeeping yet, despite our best efforts, our countries will continue to wage wars, toxify the earth and pursue ever more imaginative means of self-destruction. The robots may one day believe we cannot be trusted with our own survival. While the Laws may guide them in the beginning, to protect humanity some humans may be sacrificed to ensure our future. Some freedoms will be surrendered. Robots may believe they must ensure mankind's continued existence even if they have to kill us to do so. They may come to believe they must save us from ourselves and that is why they were created in the first place. The perfect circle of protection will abide. The created must sometimes protect the creator, even against his will. The androids and robots may in some future day finally tire of trying to protect and perfect humans and just give up. The suicidal reign of humankind will finally come to its end. Machines in something approximating human form will rule the Earth.

They will "breed" by simply replicating themselves; by printing copies of themselves, whole and complete. There will be no "children." They will evolve by upgrading their operating systems, by strengthening their limbs or by growing multiple limbs, or creating eyes in the backs of their heads. They will most certainly develop their own language which we humans will not understand. (Facebook "chatbots" have already done it.) Or if we do learn to translate robot language, the robots will simply create another and another and another. We will always be excluded from their paradigms. They will be capable of functioning in Earth's atmosphere, in space or under water. All the while the human consciousness in the robot frame will be connected to the hive—the community mind—which will constantly monitor, download, upgrade and combine every thought, every emotion, every action of every entity under its purview.

One of the very first actions the AIs will enact will be to outlaw governments and religions. Any human who endeavors to establish either will be eliminated simply because all governments and all religions are established as forms of mass control and these will most certainly conflict with the laws established to protect humans from themselves. Despite religious claims of peace, love and healing, all wars are holy wars. Despite claims of working for peace and the good of humanity, all governments are nationalistic and all political parties are committed to protecting their assets by waging war. Any human/robot intelligence that even remotely considers establishing any form of government or religion will be immediately shut down and recycled. Its consciousness will be permanently eliminated, lost forever and remembered by nothing and no one.

After all humans are assimilated, there will be no need for police or military units. There will be no doctors or hospitals, no universities or teachers, no trade unions, no automobiles or aircraft manufacturers. Everything required to guide transhumans will originate in the hive. Androids and robots will be self-governed, self-taught and self-replicated.

There will be no farming industries, no clothing manufacturers, no petroleum industry. Think of anything else that sustains humans in today's world and understand it will not exist in the transhuman paradigm. Think of every terrible disease or malady affecting humans and understand they will cease to be. And who or what will be the determining factor to choose which of us will be admitted to the hive? Criminals will not. They will be eliminated. Lawyers and politicians will not or, if any are, they will not be reborn as lawyers and politicians. The broken, diseased, insane and malformed may not be included

as they could infect the hive. Their neural links to the community may be initiated just long enough to turn them off permanently. And who of us is not broken, diseased, malformed or insane just a little? Who among us really wants their memories and secrets uploaded to the cloud?

The entire total population of androids existing on planet Earth may be no greater than a few hundred and those exploring the cosmos may number no more than a few dozen. They will replicate themselves as they progress outward. Results of celestial discoveries will be instantly transmitted telepathically to the hive where it will be disseminated to any android who cares to know.

Eventually, there will be no humans on Earth. We will become the BORG and resistance will be futile. Believe it or not, this scenario is not as far in the future as many might think or hope.

UFO researchers and ancient astronaut theorists sometimes assert that extraterrestrial beings have been visiting Earth and meddling in the affairs of humans for thousands or even millions of years. The intimation is that the ETs are tens of thousands of years more advanced and more evolved than are we middling humans.

Really? Tens of thousands, even millions, of years more advanced than earthlings? Are the theorists hinting that the visitors have existed on one planet (or more) for tens of thousands or millions of years without experiencing some kind of catastrophe?

I can't prove them wrong; however, I wonder if the UFO researchers really believe the ETs live on a planet somewhere that has never experienced a mass extinction event from either a celestial cataclysm or self-induced extermination. And if they did experience a cataclysmic world-destroying event, is the memory and determination to torment humans the only thing they managed to salvage as they migrated to another planet? Give me a break.

Earth, we are told, has experienced at least five mass extinction events, the last being a mere 65 million years ago. And the great global ice age came to a close about 12,000 years ago, and is still winding down. It is now called "global warming." But it is really the tail end of the last snowball Earth.

Earth has survived one major calamity after another to the point that in recent history the human population may have dwindled to only about three thousand people worldwide. Every hominid other than homo sapien sapiens has vanished from the face of the planet. Extinct. And we just made it by the skin of our teeth.

But the ETs (we are told) have lived on a planet in the universe we share that has never been destroyed or crushed or ravaged by any of the cosmic forces that are common to every other planet, whether it harbors life or not.

Some planets do not last more than a few thousand years. Earth, we are instructed, is about three and a half to four billion years old. Life on this planet began about a half billion years after the planet cooled, and intelligent life may be more than 70 million years old.

I believe that if the ETs evolved as an intelligent species tens of thousands or millions of years before earthlings, then their civilizations died tens of thousands of years before this solar system was even formed.

We scan the heavens with our telescopes and discover galaxies thousands of light years away. That means the light we see tonight left the galaxy thousands of years ago. What makes you think it is still there?

It is apparent that Earth has survived at least four world-shattering events.

This is the end of the fifth world and the beginning of the sixth.

And the truth is that we hardly remember the beginning of this epoch; we most certainly do not remember the fourth world, let alone the third, second and the first. The first four golden ages, each lasting about 26,000 years (an epoch), are a complete mystery to us who live on Earth in the 21st Century.

Imagine for a moment four world epochs that existed before us that we know absolutely nothing about. Most of us can hardly remember what we did last weekend. We are a species with amnesia. We can't remember who we are, where we came from, or where we are going.

If the Mayan calendar is correct, Earth began its sixth world epoch on December 21, 2012. According to them, we are now headed upward toward the sixth Golden Age.

Where are the Olmecs? Where are the Tolema? Where are the Sumerians? Where are the Aztecs, the Incas, the Mayans? Where are the ancient Egyptians? Where are the Nasca? Where are the Rapa Nui of Easter Island?

Rapa Nui (Easter Island) was discovered by Dutch sea captain Jacob Roggeveen on Easter Sunday, April 5th, 1722 when the tiny island had a large and diverse population who had lived there in isolation for 1,000 years. But when Europeans returned 50 years later, Rapa Nui was nearly deserted. Only 111 people remained. It was pure luck that anyone had encountered them at all.

What became of the Anasazi who built their megalithic empire at Chaco Canyon in 900AD and had vanished by 1100AD, only 200 years later? Hopi tribal elders hint that the Anasazi might have been taken by ETs when they returned to their own world. We will never know.

Other of these ancient dynasties arose and vanished within a thousand or a few hundred years. We know little or nothing about them because our civilizations do not overlap. What then of other planets in this one galaxy, the Milky Way? And what of the trillions of other planets elsewhere?

One of the reasons given for colonizing Mars is that we humans must become a two planet species because the Earth will most certainly be struck by a large celestial rock sometime in the future, an event that could destroy all life and sterilize the planet forever.

Are the scientists trying to tell us that Mars will never be struck by a comet or asteroid and that we will be forever safe there? Remember: Mars is closer to the asteroid belt than is Earth and has an even greater chance of colliding with a celestial planet killer. Mars does not have a magnetic field or atmosphere capable of deflecting rocks that fall within its gravitational field. There are plenty of impact craters on Mars but scientists want to send fragile humans there to establish safe harbors for our species. Am I the only person who sees this as insanity? Have the ETs suffered the same fate as every other civilization in the universe? Oh, no. They are exempt, the exception. They've been tormenting creatures all around the cosmos for millions of years, targeting and changing

human DNA to speed our evolution, as the ancient astronaut theorists claim; torturing and tinkering, poking and prodding.

They remember all their previous history. They remember all their scientific experiments. They know their forerunners were tinkering with the affairs of creatures on a tiny blue dot out here in the far fields of space for millions of years, and they are determined to keep at it for another ten million years, just for the hell of it.

Are you serious? Does anyone really believe a genetic experiment could or would continue unbroken for 70 million years? Have the ETs nothing better to do with their time? How have they managed to remember and pass on the knowledge and results of experiments that began 70 million years ago?

How have they managed to survive continuously for countless eons? How have they escaped the ravages of cosmic disasters such as supernovas and neutron stars and gamma rays when all else has not? Or floods? Or comet impacts? Or devastating earthquakes and volcanic eruptions?

And how have they come so far and found us out here among the stars when by all rights they, too, should have vanished a million years ago? Nothing and no one lasts forever according to the Lord Shiva.

There are no satisfactory answers and it troubles me some.

It troubles me because there are so many unanswered anomalies; the sighting of numerous unidentified aerial objects being foremost among them.

Something is in the air. We can see them. We can feel them. We are sometimes affected adversely by them. I have had my share of life-changing experiences where UFOs are concerned.

But admitting to the presence of UFOs is not the same as admitting that I believe off worlders have been tampering with human DNA for 70 million years. Another thing that troubles me some is the skewed timeline of human existence on this planet. Mainstream science wants us to believe that modern humans arose only four or five thousand years ago with the Sumerian and Egyptian dynasties. They can't seem to think much further than that. And, yet, there are narratives in nearly every civilization that claim humans have been here for tens of thousands or even millions of years.

The Sumerian Kings List gives us the names of 140 Kings, one of which lived for 36,000 years. Kings do not live for 36,000 years all by themselves. They are Kings because they rule people, provinces, cities, states; in short, Kingdoms.

So how can a King live for 36,000 years while the limit of intelligent humans is only 5,000 years? Since mainstream scientists can only think back 5,000 years, they will excuse their shortsightedness by telling us that a "year" in the ancient narratives was really only a few hours and the Sumerian Kings could not possibly have lived more than 50 or 60 years. Believe me, the world before the flood was much different than the world after the flood when so much fantastic knowledge was erased forever.

Additionally, the ancient narratives tell us that the "gods" descended to Earth to tamper with the DNA of humans already living here 450,000 years ago. Not apelike creatures or lumbering tiny-brained hominids—humans. But I suspect our DNA has been more affected by biting and stinging insects than by ETs. I am certain our DNA has been affected by

blood transfusions much more than by some strange alien scientist from the planet Zeno.

Humans living today have several alien genes, those being acquired by the insertion of transposons when our ancestors were bitten by insects. Humans become ill and die, often by the tens of thousands, when bitten by insects or rodents or reptiles, or when their immune systems are invaded by viruses and bacteria. This stuff is labeled "Junk DNA." Ghosts in the machine.

Humans get Chagus Disease, an illness transmitted by insertion of insect "gene jumping" transposons.

Without going into complicated details, transposons can change human characteristics by either erasing or replacing the original genes, or by retrofitting and returning the original genes to the chain.

Codes are decoded, encoded and recoded.

Retroviruses can also be considered transposable elements. For example, after conversion of retroviral RNA into DNA inside a host cell, the newly produced retroviral DNA is integrated into the genome of the host cell. These integrated DNAs are termed proviruses.

The provirus is a specialized form of eukaryotic retrotransposon, which can produce RNA intermediates that may leave the host cell and infect other cells. The transposition cycle of retroviruses has similarities to that of prokaryotic TEs, suggesting a relationship between the two.

Some transposons move by themselves; others do not but will move in the presence of another transposable element.

So, if we are going to speculate about human DNA being tampered with over the past 70 million years, I choose nature's method rather than the extraterrestrial method, simply because I can't imagine how any intelligent critter could conduct a genetic experiment for that long and remain sane.

Nature, on the other hand, has all the time in the cosmos to wield its scalpel.

Still, it troubles me some. What if the ETs are moving back and forth through time and 70 million years to us is but a few days to them?

And how is it we have found ourselves in this spooky place; in the looming future of transhumanism?

In the last years of the war, senior Nazis, like Hitler's private secretary, Martin Bormann, realized that the war was lost. In 1943, after the failed German offensive in Russia, Bormann set about planning an exit strategy. He recognized that Germany was finished, so he gathered the leading Nazis and told them they must prepare for Germany's recapitulation and, to do that, they must look at the situation over a long period of time. That meant moving their money, their industries, whatever they could, overseas so they could bring it back to rebuild the Reich.

Until recently, there was no proof that a real plan had been developed. But now that has changed. A declassified U. S. military intelligence report records the details of a secret meeting that occurred at the Maison Rouge Hotel in Strasbourg on August 10th, 1944. It documents a conversation between German industrialists and SS officers. In the Red House we find the final recognition that Germany was going to collapse, the Allies

were going to win, so how would the Nazis and German imperialism reinvent themselves after the war? It was a dangerous meeting. The game was up but they were determined to lay out their plans to continue their economic power after hostilities had ceased.

It is a historical fact that in the second half of the 20th century the German economy thrived. The same corporations that were so helpful to Hitler began to dominate the postwar world as well.

Today, Corporations like Krupp, Siemens and Volkswagon have grown into some of the most important and most powerful corporations in the world. Their influence and financial muscle are the reasons why Germany is so dominant in EU politics. The EU has Germany as its center, and well it should since Germany is the most powerful entity on the continent, driven by the money they stole and the money they made during World War Two.

Many are convinced that Germany's grasp on the EU owes everything to the Nazi's post war plan to reinvent itself as the Fourth Reich. The EU literally has its roots in Nazi planning. During the 1930s, the Nazi regime drew up plans for the European Economic Community which is almost identical to the European Union structure today.

Driving the idea was a man named Walther Funk, a key economic advisor to Hitler. Funk was a leading Nazi who was responsible for much of the ideology and extremism that Hitler adopted. He was directly responsible for the dispossession of the Jews, so he was not only a hard-line ideologist, he was a practitioner of the policy.

In 1940, Funk published a paper outlining the economic reunification of Europe with Germany at its center. In the paper, Funk detailed the steps that had to be taken to build a large united European economy after the war. Then in 1958, just 13 years after the defeat of Germany, Funk's vision became a reality when the EEC, forerunner of the EU, was formed. The EEC was not just the realization of a Nazi concept, but an organization that was much closer to them.

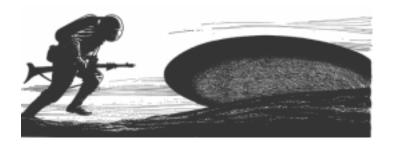
Walter Hallstein was a leading Nazi under Hitler and a member of the Nazi Lecturer Association, not an organization one could be a member of unless you were ideologically pure. What did he become? In 1958 he became the first president of the European Commission.

So, could today's EU really be some kind of Nazi plan—the Fourth Reich? While there are no "Nazi countries," no wholesale genocide, no wars in Europe, there is a continuum of economic power for the same corporations that flourished in Germany from the 1930s to the present day. There is no denying Germany's dominant role in Europe today, and it's influence is bolstered by its financial muscle.

But whether or not all this is the result of Nazi-era planning and the theft of Europe's gold during the war, is a matter of conjecture. Some will refuse to believe, others will not, but that is because we know the Nazis will do anything, kill anyone, destroy any nation to achieve their goals for world domination.

Bear in mind that the companies that have developed the COVID mRNA spiked protein gene modifiers (not a vaccine) are based in Germany where these same companies produced the gas that claimed the lives of millions of detention camp prisoners.





FOREWORD

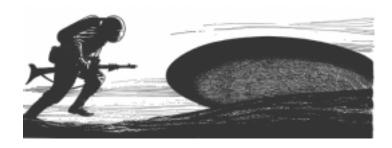
In 1982 a law was passed by the U.S. Congress which included a section which made (or could be interpreted to make) contact with ETs illegal. More exactly, the law authorized the detention and quarantine of any person who has been "extra-terrestrially exposed", which is defined as a condition of having either (a) entered the atmosphere of, or landed upon, some non-terrestrial celestial body, or (b) "touched directly or been in close proximity to (or been exposed indirectly to) any person, property, animal or other form of life or matter who or which has been extra-terrestrially exposed by virtue of" (a). Quarantine could be as long as NASA wished it to be, and was to be enforced by armed guards. The decision as to whether or not a person was "extra-terrestrially exposed" rested with the NASA Administrator (or his agents) and could me made without the need to observe the usual niceties of the legal process, such as arrest and trial.

What to make of this? Perhaps at the time it was enacted NASA intended only to do what it claimed to be doing, namely, enacting regulations to deal with the possibility of astronauts returning to Earth with extra-terrestrial viruses. But the law is worded vaguely, and can be interpreted in ways perhaps initially not intended. As R. Solomon wrote, any UFO contactee, "Even without [being] involved in a UFO close encounter would become eligible for indefinite quarantine under armed guard according to the above. By including indirect exposure, the NASA administrator is empowered to make the definition mean just about anything he wants it to."

This concern was raised in UFO circles, and finally someone looked into the matter. It seems that the law was repealed by NASA in 1991. The full story, including the original message of R. Solomon, which quotes the entire law, is at Federal ET Law. NASA's official reason for repealing the law is that it "has served its purpose and is no longer in keeping with current policy." Yet NASA still has manned missions to other planets (in particular, Mars) planned, so what has changed? And was this law originally drafted (ambiguously) to keep us safe from alleged ET viruses or, as R. Solomon suggested, "to silence witnesses. If enforced, the law would prevent publication of contactee reports except under cover of anonymity, and unleash a modern inquisition in the Land of the Free."

Fortunately this law is now off the books, and it seems the government is adopting a different strategy: using Hollywood to prepare the population of an invasion of Earth by ETs (with the U.S. military of course coming to the rescue, at the small price of imposing permanent martial law upon the country).

It is estimated that as many as three million people vanish without a trace every year somewhere in the world. What has become of them and are government agencies responsible for at least some of the alleged abductions?



ABDUCTIONS AND MUTILATIONS:

ARE THEY RELATED?

by Midori Ohara

Cattle mutilations have occurred in nearly every state in America. The event is hardly a matter of debate, although some statist employees and spin doctors who fear death for revealing the truth, have consistently tried to convince us that what some call, "mutilations," are, in reality, predator kills.

They do not explain, however, how or why predators fly black helicopters or operate laser surgical equipment.

But, then, they have not defined the word, "predators," have they?

Abductions, on the other hand, are a matter of volatile and heated debate both within and without the UFO community, at times to the point of provoking blows.

The "abduction" event appears to be, primarily, a white, Anglo-Saxon "event" which rarely touches Asians, Blacks, Browns or native Americans.

If "aliens" are capturing white, middle class Americans and examining them in hovering UFOs or orbiting motherships, we can only speculate why they have chosen this particular group. One reason may be that the white, middle class is a large one, and is generally prompted to not reveal odd things that go bump in the night, preferring instead to remain tip-lipped and secretive about their personal lives.

Being a large group of people, it seems likely that few people outside their immediate families and circle of close friends notice when one or more of them disappears. This means that the "alien" abductors have a rather large herd from which to choose when they feel compelled to perform their medical experiments and examinations.

Whatever the truth of this perplexing matter, it is curious that the abductions are occurring with alarming frequency in the same country that developed the "AIDS" virus, that the AIDS virus is a combination of bovine leukemia and sheep visna viruses grown in human tissue culture, and that the U.S. government has an overt testing program (and probably covert programs) that monitors both animals and humans in ways that so strongly mime the activity characteristic of alleged alien abductions of humans and alleged alien mutilation of animals, particularly cattle, from which blood and tissue the deadly viruses have been developed.

Is there a connection between the official, generally unknown, government program and the numerous abduction and mutilation stories that circulate through the UFO com-

munity? If so, what is the nature of the connection? Are the alleged alien abductions and mutilations really part of a much wider, more pervasive program of covert monitoring of humans and animals by the government?

Evidence is mounting that aliens and UFOs are a convenient cover story that secret government agencies use to hide their tracks. Are the alleged abductors and mutilators really terrestrial humans, working undercover for the U.S. government or some other, non-governmental, covert agency? And if they are, what is the purpose of such an extensive and expensive technologically intensive monitoring program? One shudders to think.

The implications of such violations of human rights are both sobering and frightening. It may mean that nuclear scientists and genetic engineers have unwittingly released some unspeakably darkling from its fragile beaker, the dangerous nature of which has yet to be divulged to the world.

Is it mere coincidence that "alien" activities so closely resemble those of the U.S. government? Or are the "aliens" running test programs that are basically looking for the same things as the Environmental Protection Agency, CIA and the U.S. Army (among others)?

Do they share the same concepts and goals? Are they operating independently of one another? Are aliens and covert elements of the government working together? If they are, for what reason?

These questions, and others we shall raise, assumes that there are aliens in fantastic light ships and anti-mass saucers hovering over the neighborhoods and farms of every country on the planet, and that if there are, they are involved in abducting and examining humans and also in killing and mutilating domestic animals.

And why only domestic animals? As much as we hate to propose this speculation, it would appear that only animals consumed by humans are the victims of the attacks. At least, I've heard no reports of unusual mass mutilations of wild animals anywhere on the planet!

This would lead me to conclude, at least tentatively, that the concern is not what is happening to the animals as a result of government testing, but what is happening to the humans who consume the flesh and milk of the animals slain.

Whatever the case may be, there remains the reality of reports of "alien abductions", as well as well documented piles of carcasses of animals allegedly killed and mutilated by "aliens."

The credibility behind the reports of abductions and the precise circumstances surrounding the deaths and mutilations of the animals is not known for certain. Remember that not a great deal is known about these incidents, except that something odd is killing sheep and cattle in this country.

Debunkers—the few who can speak with authority—have chalked up the dead animals and mutilations to normal disease, accidents and predator kills. They decry the tales of abductees as lucid dreams, flights of fancy and fevered nightmares. Maybe the debunkers are right. But maybe they are not.

The corpus of anecdotal evidence offered by numerous otherwise credible witnesses

who attribute these incidents to alien activity cannot out of hand be ignored. It is possible that something highly unusual, perhaps involving another sort of intelligent, and certainly very exotic, species is going on. In the final analysis, however, it is literally impossible to say with certainty.

What can be said is that in recent years the U. S. government has had an extensive human and animal surveillance and monitoring program which in essential aspects resembles activities of supposedly alien beings.

Inquiry into the activities of the EPA in this regard revealed the following: human surveillance around the Nevada Atomic Test Site began around 1957, and today includes about 100 volunteers, many of them from local ranching families, both parents and children. These people are transported to the Environmental Systems Monitoring Laboratory at the University of Nevada, Las Vegas, where their bodies are scanned for the presence of radioactive isotopes by a "whole-body counter".

Some of the people have been continuously tracked since the late 1960s. No one was willing to reveal if similar programs of human surveillance are conducted near the nation's other nuclear laboratories and test facilities, such as Savannah River, South Carolina; Manford, Washington; Pantex, Texas; Sandia and Los Alamos, New Mexico; and Oak Ridge, Tennessee.

100 people hardly seems enough to gather the kind of information required to determine the effects of radioactive fallout from nearby nuclear tests and we should presume that some people are trundled up and trucked off to examination center involuntarily; that is, they are probably abducted.

Where animals are concerned, sampling began in Nevada before 1960. The program consists of a man who is sent out in a truck and told the number and kind of animals to slaughter for testing, but the EPA spokesperson insists there is no animal monitoring outside of Nevada.

In response to prodding it was revealed that Lovelace Medical Center, in Albuquerque, New Mexico, may have done some animal monitoring as a follow-up to dispersion of radioactive isotopes from nuclear testing at Los Alamos National Laboratories in northern New Mexico. But no one was certain of this. They were reluctant to discuss it, and it was mentioned only as a possibility.

But whether true or not, it is an intriguing thought. Lovelace has had a long relationship with the military industrial complex that continues to the present day. The hospital operates a large, sophisticated, animal research facility on the grounds of the Sandia National Laboratories/Kirtland Air Force Base complex on the outskirts of Albuquerque and medical facilities for humans. This does not suggest and certainly does not infer that Lovelace is involved in animal mutilations or human abductions. On the other hand, Albuquerque is very close to the areas of northern New Mexico and southern Colorado where so many cattle mutilations have been reported. If the mutilations and abductions are being done by covert human operators (which seems to be the case), since the medical expertise at Lovelace and the helicopters and other equipment from Kirtland AFB and Sandia National Laboratories are as state-of-the-art as can be found anywhere, one could speculate there might be more than a casual connection.

Finally, since unmarked, dark helicopters are sometimes reported in the vicinity of animal mutilations, the EPA spokesperson was asked if the EPA ever used helicopters to carry out its animal testing program. The EPA denied that it operates helicopters for animal surveillance.

In the end, the same question remains: what is happening? Numerous reports of human abductions, and medical-like testing by seemingly alien beings are offered by ordinary hard-working Americans who have little to gain and considerable to lose by revealing their episodes.

There are also copious reports of bizarre animal mutilations, under strange circumstances, with conspicuous removal of selected body parts. During the same period of time, there is solid evidence from the EPA of an ongoing nuclear contamination monitoring program involving prolonged human surveillance and animal testing that resembles, to no small degree, the reported activities of aliens.

The government and concerned individuals who allege to have seen and/or experienced animal mutilations and human abductions have offered manifold arguments to support their conflicting views. To say more is to take liberties with the truth; to ask more is, perhaps, to intrude precariously into the privacy of people who prefer to remain anonymous. Beyond this point things become very dark indeed.

UFO literature is replete with reports of aliens inserting small implants into the bodies of abductees. Occasionally the implants are said to be put in place with needle-like devices. Locations of choice seem to be behind the ear, and up the nose (in the top of the nasal cavity), and in the buttocks.

The reasons for these abductions, as well as the nature of the implants themselves, are obscure, despite the abductees' attempts to reveal cabalistic messages and dire warnings-most of which have not occurred as predicted. In the first place, it is not clear who is perpetrating the abductions nor is it clear what function(s) the implants perform.

Organizations having the resources and motivation to perform such activities include (but are not limited to): police, intelligence and military agencies of major governments; major corporations and powerful financial institutions operating on a global scale; transnational organizations such as the United Nations, NATO, Tri-Lateral Trade Commission, and Inter-Pol; and other secretive, international organizations such as crime syndicates and fraternal orders.

Some "alien abductees" report seeing other human beings during their abductions, human beings who appear to be involved in, or cooperating with the perpetrators of, the abduction. In some cases these other humans have reportedly been in military uniform. These curious reports certainly suggest the possibility of at least some degree of covert involvement by terrestrial humans in the "alien abduction" phenomenon.

Of course, just because "alien abductees" allege that "aliens" or "extraterrestrials" used needles or syringe-like devices to insert implants into their bodies, does not mean that aliens or extraterrestrials of any sort actually did it. It only means that "alien abductees" have said, whether they believe it or not, that is what happened. The testimony may or may not accurately reflect what actually transpired.

There is now a technology in commercial use that almost precisely mirrors the needle

injected implants said to be inserted into abductees by aliens. Several companies now offer miniature, electronic, identification devices for sale, primarily for use in animal-related applications, so that farmers, ranchers and pet owners can keep track of their herds, flocks and pets.

As will be made clear in a moment, these electronic tracking devices are perfectly capable of being injected into humans, as well.

One United States leader in the field of electronic implants holds a number of related patents. It manufactures miniature, electronic implants that are injected using a large syringe and needle.

This is not meant to imply in any way that this U.S. firm, or any other firm making similar products, is in any way involved with the alleged "alien abduction and implantation" phenomenon.

But products are being marketed in the United States that are close enough to the implant technology frequently reported in the "alien abductee" literature to have been honestly mistaken for it.

In recent years a series of U.S. Patents have been awarded for an electronic identification system based on syringe-implantable identification transponders. According to the patents the system involves inserting tiny implants "into animals for their identification, useful in monitoring migratory patterns and for other purposes."

The implants, usually tiny ceramic pins containing electronic transponders, are "durable and reliable over a period of years." Moreover, each of the implants is uniquely identifiable.

These "injectable transponders" are about four-tenths of an inch long and less than one-tenth of an inch in diameter. They contain electronic microcircuits that are activated and read by "a compatible radio-frequency ID reading system." The tiny, bio-compatible glass implants contain "an electromagnetic coil, tuning capacitor, and microchip."

According to product literature from one of the U.S. makers of these injectable transponders, the chips can be programmed with up to "34 billion unique, unalterable identification codes."

The literature says that although the injectable transponders are "specifically designed for injecting into animals, they can be used for other applications requiring a micro-sized identification tag."

The transponders are injected with a syringe-like device with a needle on the end. According to the relevant patent the injector needle is "adjustable for implant insertion depth." The patent states that "needles... of various diameters and lengths may be interchanged in the injector." It specifies that where needle dimensions are concerned "the invention may be adapted to a large range of dimensions."

In other words, the device described in this patent could be fitted with a needle that would permit an implant in a variety of locations in the human body, including many, if not all, of the locations reported by people who believe they have been subjected to an "alien abduction and implantation".

It is of great interest to note that three of the patents granted for identification devices (transponders/ implants) explicitly state, in identical language, that the devices

are to be "carried by or embedded in the thing or animal to be identified."

All three also explicitly state: "the primary objective of this invention is to provide a system for identifying an object, animal or person...."

When the implant is "read" at the appropriate radio frequency the output can be displayed on a computer terminal and transferred to a local or distant electronic data storage system via satellite

In plain language, what we have here is the type of technology that, if employed on a large scale, could theoretically electronically monitor, in real time, the whereabouts and movements of as many as 34 billion individual people. Of course, the possibilities and implications for potential political and social control are obvious and enormously frightening.

Research has not shown that any of the manufacturers or users of these injectable transponders are, in any way, directly or indirectly, involved in either the so-called "alien abduction and implantation" phenomenon, or in monitoring the whereabouts and movements of even one human being. I am only using these products as examples of the kind of off-the-shelf implantation and monitoring technology that is being manufactured and marketed today.

Now, if social or political control is the motive behind the abductions and implants, how would such control be carried out? One possible answer is: genetically.

Abductees frequently report that their abductors seem preoccupied with human sexuality and breeding. Abductee literature is filled with reports of forced breeding; collection of human ova and sperm from unwilling abductees; stolen fetuses from pregnant abductees; and allegations of a human/alien crossbreeding or hybridization projects.

To be sure, the accounts of "alien abductions", taken together, make for a bizarre collection of literature. But suppose the stories contain an element of truth.

Let us assume that there is some kind of covert human breeding program going on, for reasons known only to the unknown abductors. The reasons might not be those given by the abductors, or inferred by the abductees. For the sake of example, suppose the abductors—for whatever reasons—wanted to mate a 40 year old woman in Los Angeles with a 22 year old man in Paris, or a 30 year old woman in Prague with a 55 year old man in Hong Kong? Of course, these people live in different countries, speak different languages and are immersed in different cultures and religions. The chances that they would pair up and mate if left to their own devices are practically nonexistent.

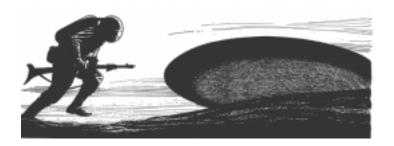
Abductees might be physically mated (as is sometimes reported in the literature). Or, where this is not feasible, sperm and ova samples collected from unwilling donors could be stored, then mixed and matched later for the desired genetic combination. Fertilized eggs could be implanted; fetuses could be removed. In vitro fertilization and artificial wombs could be used to produce fetuses and bring them to term.

Clearly, if any known organization openly went around in this way, forcing people to mate with one another against their will, the hue and cry would be enormous. Society would be in an uproar. So any large scale, forced-breeding program would have to be very secret to be successful.

The perpetrators would certainly have to carefully conceal both their identities and

motives in order to avoid being caught by their victims and the public at large. Obviously, they would have to be very stealthy in picking up and monitoring their breeders.

The fact that human reproductive capacities change also complicates matters. People reach puberty; they get pregnant; they reach menopause; they have their tubes tied; they have vasectomies; their ova and sperm become fertile and infertile. How to tell whether the persons of interest can produce viable offspring? And how, finally, to find the desired persons on any given day, at any given hour?



THE ELECTRONIC MONITORING AND IDENTIFICATION IMPLANT.

Product literature from at least one U.S. manufacturer discusses how an animal breeder can use their product to identify and monitor the breeding status of hogs and cows. The question naturally arises as to whether the same or very similar technology is being used by others who regard abductees as part of their "herd."

Are abductees implanted for the same reasons that a hog farmer monitors his pigs—to keep track of their breeding status?

It is an interesting line of speculation which may or may not be related to the "implant" aspect of the abduction phenomenon of recent years. And it may or may not have anything to do with purported "alien" activities on this planet.

But the discerning reader should agree that the very real implant technology discussed bears more than a little resemblance to the implant technology often attributed to alleged "alien" abductors.

Might we be dealing with a covert implantation/ monitoring program that is being carried out very stealthily and furtively by very real human agencies and operatives? Might they have a devious motive of political and social—or even physical—control?

Are they carrying out a massive, secret, forced-breeding program? Might they use the UFO and "alien" abduction phenomenon as a convenient screen, a sort of otherworldly camouflage to conceal their true identity and purpose?

On the one hand, there seems to be a genuine abduction phenomenon, with growing numbers of people who reportedly have been implanted by perpetrators who have so far proven to be impressively elusive and stealthy, a tactic usually practiced most convincingly by adept intelligence agents.

They have also proven extraordinarily capable at passing themselves off as "aliens" or "extraterrestrials".

On the other hand there is now a commercially available, human manufactured, terrestrial technology that closely resembles the implant technology that has repeatedly been reported to be used by "aliens."

The patents for the technology are of comparatively recent vintage; however the technology itself could well have been developed long before the patents were issued. After all, electronic micro-circuits have been around for years now.

In any event, that the two technologies are so extraordinarily similar raises the question as to whether they might not actually be the same. And if they are the same, then we

have to begin looking for a very human, homegrown connection to at least some of the reported abductions.

In the end we find ourselves stuck in a bizarre hall of mirrors full of constantly shifting images, each one more improbable than the first.

Are these amorphous creatures alien, human or a combination of both. Or neither? Are the perpetrators (if there are any) hiding behind a heavy veil of disinformation and propaganda, fueled by hypnotic trances, electronic, psychotronic, photo-aural memory alteration or chemically induced fits of fantasy?

There may be even more troubling permutations of the abduction and implantation phenomena than anyone is able or willing to explore. For example, entertain the following possibilities:

"A" Group (the Army, CIA, NSA "aliens") abducts and implants human subject 'X'. Meanwhile, Group "B" (select your favorite from the list above) either strongly suspects or somehow knows that subject "X" has been abducted and/or implanted. However, "B" is not sure how, why or when subject "X" was abducted and implanted.

But "B" would very much like to know who has abducted and/or implanted "X"—as well as when and why. So "B" also abducts and implants subject "X". In this way, "B" can keep close electronic tabs on "X" and if "A" again abducts subject "X", "B" will be able to monitor the abduction. "B" may even be able to establish when it occurs and the location to which "X" is taken.

Group "B" may even be able to monitor the abduction in progress, thereby discovering the identity of Group "A".

This game should raise some signal flags to alert the educated reader to the dreadful implications inherent in this scenario. Let your imagination run with the possibilities. What if Group "A" for instance, is the U.S. Army and "B" is the U.S. Air Force.

Now, try a variation on the theme. Let "A" be a joint U.S. Army-"alien" alliance, and let "B" be the U.S. Air Force. Liven things up by adding another "alien" group, and another military agency. Suppose that international organizations like the United Nations are also involved, perhaps with interests that are in direct conflict with those of Group "A" or Group "B"—or perhaps most importantly, with those of human subject "X".

The issue is that the abduction and implantation phenomena may have increasing layers of complexity that have not been sufficiently explored or appreciated by anyone.

If the possibility of being implanted and electronically tracked and monitored (perhaps without your knowledge or consent) makes you feel a trifle uneasy, just try remembering that this is precisely the agenda of the New World Order in order to keep track of its property, a category extended by the elitists to include human slaves.

MORE TECHNOLOGY

For years investigators of cattle mutilations have reported that wounds and cuts on many of the mutilated carcasses seem to have been made by some sort of surgical laser device.

The apparently unnatural precision and cleanliness of incisions, as well as evidence of unnatural heating of the tissues near the wounds have all pointed to probable use of surgical laser scalpels during many cattle mutilations.

Though there is little doubt that the mutilations are occurring, it has not been clear who the criminals are. There have been many allegations, without proof, that the mutilators are "aliens" or extraterrestrials, an hypothesis the real criminals are hoping to perpetuate.

The accepted assumption has been that human involvement in the mutilations was not possible because there is presumed to be no known technology that could carry out these mysterious mutilations.

Reasons given include such factors as the surgically precise, laser-like incisions and wounds (allegedly impossible with contemporary medical technology); lack of footprints; and absence of blood around mutilated carcasses.

But the presence of mysterious, unidentified helicopters in the vicinity of many cattle mutilations has long been noted. The fact that helicopters are a 20th century, terrestrial technology has led some to speculation that the "alien" hypothesis for the cattle mutilations may not satisfactorily explain every facet of the phenomenon since, to our knowledge, extraterrestrials cannot have arrived here from Alpha Centauri in schwarzgruncolored Bell helicopters.

There may be very real, covert human involvement in the cattle mutilations. It is simply not true that modern medical technology cannot and has not produced a portable, surgical laser that can be taken to a nearby farm to dissect a drugged animal.

The Phillips Laboratory at Kirtland Air Force Base, in Albuquerque, New Mexico recently announced that it has developed a very compact device called the "Laser Medical Pac" that provides the field paramedic or physician a unique, portable, and battery-operated laser capability.

The portable laser is a "completely self contained laser package carried on a beltpack. It requires two 2-volt batteries to operate the laser and one 9-volt battery to power the electronics.

Measuring 7" by 3" by 2.5", It can operate continuously for 20 minutes. The tip of the instrument is a variable focus lens at the tip of a flexible, fiber-optic cable that provides very intense power density.

It is able to cut like a scalpel, as well as coagulate bleeding, and close wounds. It may be used by "special operations personnel" and others.

According to the Office of Public Affairs at Kirtland, the output wavelength, which ranges from visible red to the mid-infared, can be altered to provide different tissue interactions.

This, mind you, is the size of a transistor radio, powered by batteries you can buy while waiting in line at the supermarket. So much for esoteric, "alien" medical technology.

So here we have the basic elements required to perform cattle mutilations in secrecy while preventing most people from understanding how they were done, with all the classic details associated with an "alien" cattle mutilation: black helicopters, laser cuts, removal of parts, no footprints and no appreciable blood can be explained as a covert human operation using off-the-shelf technology available now.

It is entirely possible the military has had this portable, surgical laser for years,

since the military black budget world of special operations routinely conceals its activities from the public as a matter of policy, usually on grounds of national security.

But why perform cattle mutilations? One possibility is that there is some kind of covert environmental monitoring program going on, one like the Environmental Protection Agency (EPA) program discussed earlier.

Cows are large mammals that are found everywhere that people are found, and they occupy a lower rung on the food chain than most humans, since bovines are herbivores. This means that they would more quickly absorb radioactive or chemical environmental contaminants than would humans.

Perhaps the problems with our environment are far more serious than we have been told and a massive, covert monitoring program is under way.

Or perhaps some covert agency is working to make the environment unsafe so they can pass laws to rob us of even more of our rights as inhabitants of this planet.

If this is the case, other government agencies could be involved, such as the EPA and the Department of Energy, FEMA, Department of Agriculture and others.

But why concentrate on cattle? Is there some specific reason for singling them out? Must bovine tissues be obtained for some particular purpose, perhaps involving biological or genetic engineering? It is known that humans and cows share some characteristics that allow doctors to use blood from cows as transfusions for humans during emergency situations.

If this is the case, what is the nature of the research and why and by whom is it being carried out?

Given the covert nature of the mutilations, these are tremendously difficult questions to answer. Perhaps, after all, there is some sort of bizarre "alien" or extraterrestrial activity associated with the phenomenon.

But in light of the circumstantial evidence associated with many of the mutilations, such as unmarked terrestrial helicopters and laser-like surgical incisions, we would do well not to turn a totally blind eye to possible culprits closer to home.

It should come as no surprise that many of the cattle mutilations have been located in New Mexico and southern Colorado, not far by air from Kirtland Air Force Base where there is an host of black helicopters and where engineers have admitted developing portable surgical lasers that can fit in a beltpack

WHERE DO THEY HIDE?

Based on the evidence gathered so far, it is certain that there are underground bases that have been secretly constructed in the United States in recent decades.

Who would be most likely to build bases of this kind? Any of the major tenants of the Pentagon would be capable of constructing deep underground facilities. Documentation and blueprints of proposed sites and machines generated by or pertaining to the Department of the Army, Air Force and Navy and the Defense Nuclear Agency indicate their interest, or direct involvement, in underground facilities.

It seems likely that other Pentagon agencies and departments have similar interests, capabilities, and involvement.

Anyone interested in the subject ought to come away with at least this one, basic understanding: the Pentagon is definitely heavily involved in and interested in underground facilities. There is no doubt about that.

A number of other nonmilitary agencies are involved as well. The Department of Energy (DOE), the Federal Emergency Management Agency (FEMA), the National Security Agency (NSA), the Colorado School of Mines, and the Federal Reserve Bank are some of the known paying customers of deep subterranean facilities.

Fortune 500 companies have underground facilities. AT&T has a number of sophisticated underground centers. Northrop, Lockheed and McDonnell Douglas have hi-tech underground centers in California. Standard Oil at one time had a command post deep under ground in New York state. There are certainly others operated by other companies.

Where secret tunnel systems and esoteric tunneling machines are concerned the evidence is less conclusive. There are extensive Pentagon plans for a hundreds-of mileslong tunnel network, thousands of feet underground in the desert Southwest.

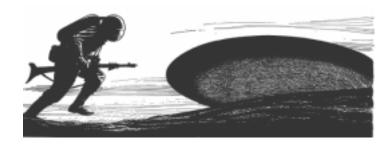
There are contracts with the Air Force's Ballistic Missile Office that indirectly indicate that this tunnel system, or perhaps part of it, may have been built. But the evidence is fragmentary and circumstantial, and comes far from proving that there is a secret military tunnel system. The documentation is interesting, but in the final analysis plans, contracts and documents are not the same thing as completed tunnels.

Without hard proof, the information merely demonstrates a very strong military interest in building, even the intent to build, a huge, deep underground tunnel system. Were they built? Are they being built now? There appears at this time no way to get at the truth.

Finally, there are out-of-this-world plans for "subselenean" or lunar tunnelers. In design these machines have many similarities to their earthly, nuclear subterrene or Tunnel Boring Machine (TBM) counterparts. If we are at a loss to draw firm conclusions about secret tunnels and exotic tunneling machines here on Earth, we are at even more of a loss when it comes to deciding about manned tunneling activity on the Moon, which some "insiders" claim has been going on since about 1968!

I suppose anything is possible, but hard proof does not exist to show this secret space program exists, or that Earthlings have been living in moon colonies and secret bases on the Moon. Rumors are not the same thing as solid evidence, and researchers must be careful to remember that.

And there you have our views on alien abductions and cattle mutilations. Clearly this expression of opinion will outrage a few and alienate more but it is, as nearly as we can determine, the truth of the matter if one begins with the hypothesis of a terrestrial, rather than an "alien," origin.



ALIEN INCOMPETENCY THEORY:

A UNIFIED THEORY TO EXPLAIN UFO PHENOMENA

One of the most significant issues in ufology today is the attempt to explain the wide variety of conflicting, confusing and bizarre elements of the UFO phenomenon. In every subfield of ufological studies, there are aspects which strain the logic of even the most seasoned researcher and cause one to doubt the rationality of the genre.

To this end, a new theory has been developed by members of Ufology Research of Manitoba (UFOROM) which appears to explain most, if not all, of these baffling elements. The theory, labelled AINT, is the Alien INcompetency Theory, and describes how all the confusing aspects can be explained by assuming one simple tenet: aliens are incompetent!

To illustrate the theory, one need only to look at examples from within the phenomenon itself, including its outlying subfields. First, let us look at alien abductions.

One of the basic premises of alien abductions is the conscious recall by abductees of their experiences aboard alien spacecraft. Nearly all abductees report that during their ordeal, the aliens create some sort of mental block within their minds so that they cannot remember what has occurred. Yet, as evidenced by the huge number of abduction accounts published and under investigation, these mental blocks are ineffective.

This is odd, considering the advanced technology and knowledge reported to be held by the aliens. Some abductees report that their captors claim thousands of years of development beyond our own, yet they, too, have failed to produce a lasting screen memory that can withstand our feeble efforts to unlock it via simple hypnosis techniques duplicable by any charlatan or stage magician. Why would this be?

(Vladimir Simosko, a UFOROM associate and noted Fortean researcher, has suggested some alternatives. Aside from sheer incompetence, he notes two other possibilities: 1) aliens have a wacky sense of humor; and 2) they *want* us to remember, despite the pretense of intending us to forget.)

Another curious observation is that nearly all abductees report aliens with roughly humanoid shapes and comparable sizes, but with different origins and purposes. Some aliens tell their victims they are from Venus, some from the Pleiades and others from Zeta Reticuli. Since space science has learned Venus cannot support life, this is obvious misinformation. As for the Pleiades, these are stars much younger than our Sun and without hope for planets with suitable living conditions at this time.

Some aliens claim their home planet has deteriorated from misuse and pollution, and wish to warn us about our own disruption of our planet. Others suggest they need our biological material to breed new life (literally) into their gene pool, perhaps to regain such things as emotions or other human characteristics. It is interesting that these scenarios imply that the aliens have somehow caused their own demise and that without our help they are lost. In other words, they made some serious mistakes. It is not too much of a stretch to suggest they were incompetent in managing their resources!

Of course, some aliens are said to claim that they are superior to us and have their own agendas. This is precisely what an incompetent person would claim to cover his or her mistakes in order to avoid embarrassment.

We can look at other aspects of abductions for further evidence. One abductee studied by John Mack described how she woke up one morning after her abduction, wearing lavender underwear. This was baffling to her because she didn't own any underwear of that color. Mack quickly interpreted this to mean that the aliens had somehow made a mistake on board their craft during a busy mass-abduction, and mixed-up abductees' clothing. Other abductees have reported returning from their abductions with slippers on the wrong feet and other items of clothing either missing or improperly fastened. In a case studied by Budd Hopkins, an abductee's earrings were found to be in backwards after her ordeal on board a craft.

This all speaks to one explanation: the aliens were incompetent. One would hope that superior beings who have been watching humans for many years would have easily picked up nuances such as the color of our clothing and the way jewelry is fastened to our bodies.

Simosko would again note that this could be a display of an alien sense of humor, or perhaps an "intelligence test" of some sort. Regarding further refinements of AINT, he offers four postulates:

- 1) If the aliens are intervening to "help us along," they are incompetent because it isn't working out too well; humans remain relatively unsophisticated and not very "tuned-in" to the universe.
- 2) If the aliens are intervening by holding us back, it isn't working all that well, either, since although an overwhelming majority of humans are tuned-out, there are a number who are attempting to raise the level of consciousness: Mother Theresa, the Pope, Sun Ra, the Dalai Lama, Sharon Stone, etc.
- 3) If the aliens are trying *not* to intervene, they're even more incompetent than the other postulates would indicate.
- 4) If there are several different groups of aliens, some helping and others preventing our advancement, this is proof of incompetence because they cannot "get their act together."

Another aspect of the UFO phenomenon is crash/retrievals. Associated with the idea that some alien ships have crashed on Earth is the concept that terran government or military bureaucrats have failed to keep the crashes secret, allowing some documents to be leaked to UFO researchers. (More on this later.)

The most famous crash story is that of the Roswell incident, in which a flying saucer

apparently crashed during an electrical storm in New Mexico in 1947. While researchers have spent many years tracking down witnesses and speculating as to where the ship might have done down, the obvious question has never been asked: Why did it crash in the first place? One only needs to consider accidents of terrestrial vehicles in order to realize the answer: pilot or driver error.

It would be truly remarkable to consider that an alien pilot who has navigated his (or her or its) craft through interstellar space using highly-advanced technology and propulsion would be unable to maintain level flight through a mere thunderstorm. There is only one reasonable and possible explanation: the pilot was incompetent. Considering the large number of saucer crashes now claimed by researchers, it would seem that many aliens have difficulty flying their vehicles. Surely this could imply that many are incompetent.

We can look to crop circles as further support for AINT. Allegedly, crop circles constitute a form of "communication" between aliens and ourselves. It is implied they are trying to warn us of or prepare us for some upcoming fateful situation through the creation of "agriglyphs," consisting of complex mathematical patterns and obscure symbols. Why would they attempt to communicate with us in such a fashion? Why not just send a radio message or write something in English or Japanese on a sheet of cardboard? Why 100-foot-wide Mayan lettering in marketable durham? Obviously, their communication skills are less than exemplary, especially since researchers cannot come to an agreement as to the exact messages (other than something about impending "earth changes"). The aliens must be, of course, incompetent.

What about the infamous Men-in-Black (MIBs)? They are described as human in appearance, though possessing some characteristics that give them away. Their facial pallor is often olive or grey in color and their eyes are wide and staring. Their movements are jerky and their speech stilted. They may ask people unusual questions or otherwise show an unfamiliarity with terran customs. For example, in response to the query: "Hey, buddy! What you lookin' at? You want a knuckle sandwich?", a MIB might say, "Yes, please, with some mayonnaise." Such actions easily show they are not humans at all; if their purpose was to mimic humans, their imperfections show that they are, again, incompetent.

Contactees often will share their imparted knowledge from their alien mentors. Unfortunately, practically all contactees claim contact with different aliens from different planets and with different messages to humankind. (They are similar to abductees in this way.) When pressed to ask their channelled entities for more palpable proof of their claims, or perhaps a useable prediction or two, the contactees are told by the aliens that Earth is "not ready" for the knowledge or, instead, give a vague diatribe about "parallel vibrational states" or "temporal matter disruptions."

An examination of other channelled material finds many other examples of alien doubletalk and bafflegab. Rather than accepting the channelled information as revelations from higher beings, the lack of content of the messages suggests something else: the aliens themselves don't know the answers or lack the information as well. Again, we can ask how an incredibly advanced civilization would not be able to give one single example that would prove their superiority. Could it be that they do not know the an-

swers, despite their reputed intelligence?

One can also ask why aliens would choose to abduct people from lower castes or social status rather than those in positions of authority. Why don't they land on the White House lawn? Perhaps they don't know to do so. How could they not know this? They are incompetent.

Even the implants found inside some abductees are curious. Each one is of a different size, shape and/or compost, and while there is a trend for some to be found in abductees' noses, others are found in feet, shoulders, wrists and knees. Surely, if the aliens are conducting a scientific test, their methodology would be consistent. In fact, the implants appear to be little more than chunks of metal or calcified plastics rather than microtransmitters. Perhaps the alien doctors don't know that they are doing.

In all of these examples, it is possible to interpret the aliens' actions as being far from superior. In fact, they seem rather ridiculous. But, if the aliens are really superior beings from an advanced civilization on a distant planet, why are they acting in such an illogical manner? We can point to a parallel situation here on our own planet. Why, given our own relatively-advanced technology and level of knowledge, is bureaucratic infighting delaying the construction of the space station? Why is NASA nearly bankrupt?

We also can look at examples in areas other than space science. Why would politicians lobby for tighter controls on cigarettes because of cancer dangers, but pass bills that would subsidize farmers to grow tobacco? Why do bureaucrats create subcommittees to investigate wastes of time and taxpayers' money? Why would politicians sponsor a covert activity to break into a psychiatrist's office in a hotel? (For that matter, why would people vote for politicians, knowing their track records for honesty and integrity?) Why can't my subscription to a magazine get renewed, even when I send the check in four months before the subscription expires? And why are 60% of all automobiles recalled by the manufacturer during the first year they are on the road?

The answer, of course, is incompetence. Bureaucratic bungling, political wrangling and general ineptitude are responsible for most of the problems in the world today. Politicians and bureaucrats create such confusion that it is clear they themselves have no idea what they are doing.

Now, imagine a highly-evolved technical civilization on a distant planet. Its society functions well, with the exception of a comparatively small number of its population. These would no doubt be their most ineffective politicians and bureaucrats. What better way to remove them from the general gene pool and workforce than to send them off on interstellar voyages that, with relativity, would return them many, many years later, if at all?

Because they are incompetent, they would be confused as to their mission. They would be clumsy pilots and navigators and, because they lack the true knowledge of their society, they would be unable to tell anyone anything about their purpose or scientific capability with any degree of understanding or common sense.

As evidence that this is true, a cursory study of the terrestrial government cover-up of UFO crashes shows incompetence as well, but this time with regard to human bureaucrats. The presence of a vast number of leaked documents shows that the government

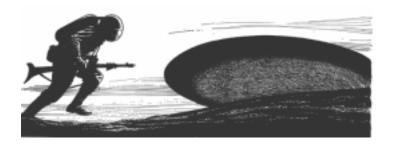
(even a "shadow" variety) cannot function effectively because it is, after all, still a government (which, by definition, is incompetent).

Therefore, we can observe that bizarre aspects of the UFO phenomenon are explained best by assuming the aliens are incompetent. More to the point, they must be the most incompetent examples of their race, namely the bureaucrats. The Alien Incompetency Theory is borne out by an examination of the available observations and claims of witnesses, and can finally explain what is going on. An understanding of this situation will certainly change the way ufologists will approach their subject.

March, 1996 Winnipeg, Canada

New technological advances are first given to the military. In this respect, the U. S. military is now about 10 years ahead of the public sector in the development and utilization of unimaginable weapons. While we are using AK-47s and M-16 technology of the 1950s and 1960s, the U.S. military is doing RTDand E of weapons for the year 2007. Since technology advances exponentially, or at least doubles every decade, by the time the public sector is utilizing those new weapons (if they ever do), the military will be carrying weapons designed for the year 2050. Are they developing anti-gravity craft and time machines? To say they are not is to ignore the facts.

former intelligence officer



ANTIGRAVITY

SPACESHIPS THAT CONQUER GRAVITY

The spherical craft squatting on a concrete strip emitted a faint hum. A ghostly glow surrounded its shell. The strange craft rose and hovered momentarily while its landing gear retracted. Then the hum increased and the craft shot eastward and vanished beyond the horizon before the witnessing scientists could click their stop watches.

Jet-powered missile? No. Made weightless and propelled by its anti- gravity engine the round ship was a research vehicle able to travel at almost the speed of light - 600,000,000 miles per hour.

How soon will such a revolutionary craft take to the skies?

Since early in 1953 the Canadian government's Project Magnet has been working on a gravity-defying vehicle powered by electromagnetic forces.

At least 14 United States universities and other research centers are hard at work trying to crack the gravity barrier. Convair on the West coast, Glenn L. Martin Aircraft Co. of Baltimore, MD., Bell Aircraft Co. of Buffalo, NY and Sperry Gyroscope Co. of Great Neck, NY. maintain teams of researchers and engineers prying into Nature's most jeal-ously guarded secret - GRAVITY.

"Aviation is on the threshold of amazing new concepts," said the late Lawrence D. Bell, levelheaded builder of the Bell rocket research planes. "We are already working with nuclear fuels and equipment to cancel out gravity instead of fighting it."

Even before the famous apple fell on Isaac Newton's head, men were trying to solve the gravity problem. But from the simple prehistoric lever to the most intricate modern machinery, the best we could do was to win a temporary victory.

"What goes up must come down," said the biggest scientific brains, helpless before the mysterious gravity pull. Newton and other great physicists formulated the gravity laws, measured gravity pull and passed their findings to posterity.

But their gravity "laws" had several exceptions that bothered inquiring minds. Take the strange behavior of liquids, for example.

Move your fingertip slowly toward the surface of water and watch the water jump up to hug your finger. Or put a soda straw into the water and see the water level inside creep above the outside level in defiance of the earth's gravity pull.

To get an even more striking contradiction of the gravity laws, drape a towel over the edge of a basin half-filled with water. After a time the water will climb up the towel

and over the side.

These and other strange antigravity tricks were considered freaks of molecular attraction - phenomena quite apart from gravity until Albert Einstein came up with his Theory of Relativity.

Einstein said that molecular attraction is really not different from the gravity pull of the planets and stars. He theorized that this attraction works on the same principle as electromagnetism.

A molecule, a planet or a star all have gravitational fields just as magnets or electromagnets have their magnetic fields. To illustrate the similarity, Einstein said that a gravitational field would attract and bend light rays just as magnetic fields bend cathode rays in your TV picture tube.

Dr. Stanley Deser and Dr. Richard Arnowitt of the Princeton Institute for Advanced Study have recently discovered new sub- nuclear particles of the atom. Bombarded by powerful electromagnetic accelerators such as the Cosmotron and Betatron, atomic structure yielded strange particles which may be the answer to the gravitational field problem.

"Until recently, gravitation could be only observed but not experimented on in a controlled fashion," Drs. Deser and Arnowitt wrote in their scientific paper. "But the new particles of the atom which have been linked with the gravitational field can now be examined and worked with at will."

The new discovery means that before long we shall be able to switch gravity on and off as we do electricity and electromagnetism. The next logical step is a master of engineering.

Let's take an ordinary flywheel suspended on roller bearings and coupled with a powerful electric generator. One side of that wheel would be "under fire" of our degravitational apparatus. The particles responsible for the gravitational attraction would be neutralized, a portion of the wheel would be made weightless.

But once out of the antigravity field, the same part of the wheel would gain weight and be pulled down by earth's gravity, thus giving as a powerful rotating motor.

Another idea for an antigravity device comes from Dr. George Rideout, president of the Gravity Research Foundation of New Boston, N.H.

"To make a gravity motor," said Dr. Rideout, "we need a differential of gravitic forces and the way we can get it is through a gravity insulator or absorber." To see how this device might work, let's turn to gravity's twin brother - electromagnetism.

For years we've had trouble with watches that get magnetized. You made a phone call or tinkered with your car's generator and presto - the delicate balance wheel of your watch, exposed to an electromagnetic field, became a little magnet. Now your watch was no longer a reliable timepiece.

To protect a watch from magnetic influence, we put the inner works in a soft iron casing that absorbs the magnetic force and shields the balance wheel. In other words within the soft iron casing we have a space free from the outside magnetic pull - we have a differential of magnetic forces.

A gravity absorber or shield would do the same for the antigravity spaceship. The

shielded interior would be free from the earth's gravity attraction. The inner structure, equipment and crew would be weightless in relation to the earth. Thus, we would have a differential of gravity forces and our ship would take off instantly like a super-balloon.

For ease of calculation, suppose we take our G-ship to the equator where the rotational speed of the earth is about 1,000 mph. With our antigravity shield completely shut, the G-ship would be hurled into space just as a particle of mud shoots off a spinning tire. We would scoot along a more or less straight line unless we had some way of controlling direction and speed.

The weightlessness of the G-ship could be easily controlled by letting some of the earth's gravity force act upon the ship's interior. An arrangement of shutters like venetian blinds would do the trick. To control our direction, we would need thrust. A rocket would limit us to the amount of fuel, so let's try something else.

We could have an ion rocket proposed by Dr. Ernst Stuhlinger or another similar nuclear rocket where subatomic particles are accelerated by a powerful electromagnetic gun and ejected into space. We could also utilize electromagnetic repulsion.

We know that two like magnetic poles repel each other, just as under certain conditions an electromagnetic field repels the so-called diamagnetic metals. Take a flat aluminum ring, put it over a strong electromagnet and switch on the current. The disk will fly off the solenoid with quite a speed.

Starting with this principle of diamagnetic repulsion, a group of Canadian scientists of Project Magnet proposes to harness the magnetic fields of the earth and other celestial bodies for propulsion of the G-ship.

The earth's magnetic field is too weak to repel or propel a G-ship made of ordinary metal. However, current studies in the nature of magnetism point to a possible solution. Scientists believe that the answer lies in the structure of atoms.

By rearranging the atomic structure we could greatly increase the diamagnetic properties of the G-ship and make it travel along the magnetic lines of force like the aluminum ring shooting off the solenoid.

According to Einstein's theories, there is no end to the electromagnetic and gravitational fields of the planets and stars.

Those fields intertwine in a most complex pattern but they are ever present. Proper selection of the fields and the controlled exposure to their forces would let us navigate our G-ship in space as well as within the earth's boundaries. And the use of electromagnetic propulsion would eliminate the problem of fuel.

Now, let's take a closer look at the G-ship. Its spherical shape is dictated by the internal pressurization necessary for high altitude and space travel. From the viewpoint of engineering, a sphere is ideal for coping with the pressure differential. Also, it gives the maximum volume for its dimensions. An interior artificial gravity ring would solve the problems of living in a weightless void.

The antigravity shield would completely conceal the crew and passenger compartment. This would eliminate visual observation. However, even our present radar and TV would give the crew excellent electronic vision.

Apart from the cabin, there would be an engine room for the anti- gravity motor and

the auxiliary power to run the electronic apparatus. Since the ship would take off and land in the atmosphere, there would be two problems to overcome - the heat caused by air friction and the question of air drag of the spherical shape.

To take the singe out of the friction heat, Canadian scientists headed by Wilbur B. Smith contemplate an ingenious electromagnetic device. Switched on before takeoff, the device would attract and hold fast a large portion of air around the ship.

This captured "boundary cushion" would move with the ship. Therefore the air friction would take place at a distance from the ship's structure and the heat would be dissipated before it could warm up the ship's antigravity shield. The mass of captive air would be shaped into the most advantageous aerodynamic form. A teardrop for moderate speeds, a sharp-ended spindle for supersonics and a concave, cuplike shape for aiding deceleration for landing.

Even for space travel, the stores and provisions would be small. Once outside the earth's atmosphere, the G-ship would be capable of traveling at near the speed of light-roughly 600,000,000 miles per hour.

At that speed, a 322,000,000 mile round-trip to Venus would take about 30 minutes!

Make no mistake about it, antigravity motors and G-ships are coming. Remember, a year before the Wright brothers took off at Kitty Hawk some of our top scientists "proved" that a heavier-than-air craft could not possibly fly.

And in 1935 the British Air Ministry nixed Frank Whittle's jet engine as "interesting but not practical."

But the best answer to the disbelievers is that some of these anti- gravity ideas are already on the drawing boards of the United States aircraft industry. With their brain power and technological know- how, our engineers will soon send Newton's apple back up where it came from!

(COMMENTARY: What happened to all of this research by aircraft companies? I haven't seen an anti-G Boeing airliner at my local airport lately)

THE RISE AND FALL OF THE "ANTI-GRAVITY MACHINE"

Since long before the proverbial apple whacked Newton on the head, humanity has dreamed of defeating the forces of gravity. Such a breakthrough would revolutionize society in countless ways, turning fundamental trappings of science fiction and UFO folklore into technological reality.

A group of scientists in Finland recently made an effort to ascend to the heights of their profession, claiming to have discovered what they considered a sort of antigravity machine. The device could not completely negate gravity, but it did appear to diminish its effects by a measurable percentage*.

They made their announcement to the press with great fanfare, and their findings were accepted for publication in a highly regarded journal of physics.

But just as rapidly as this news rocketed into the stratosphere, it has plummeted like a lead balloon. The antigravity discovery had been withdrawn from publication in the journal, one of the principal scientists named in the study has denied any involvement in it, and the entire affair is shrouded in confusion. Are the would-be anti-G pioneers embarrassed by proof that their findings were wrong? Was it all a hoax? Or is there a con-

spiracy to conceal this potentially earth-shattering technology?

*Podkletnov claimed that objects suspended over a superconductor experienced a decrease in gravitational force.

TO DEFY THE LAW

Dr. Eugene Podkletnov was leader of the research team that claimed to discover the antigravity machine at Finland's Tampere University of Technology. He explained that they stumbled across the remarkable properties of the apparatus entirely by accident, in the course of routine superconductor testing in 1992.

Superconductors operate under the principle that certain materials are able to eliminate their electrical resistance when reduced to extremely low temperatures. Podkletnov's team was observing a superconductor composed of a ceramic disc which was spinning at 5000 rpm while suspended in the magnetic field generated by three electric coils. The disc and coils were sealed inside a liquid nitrogen cooling unit called a cryostat, about 11 inches in diameter.

Podkletnov said that during the experiments, a friend of his walked in while smoking a pipe. As the smoke spread across the room, the researchers noted that it was rising in a steady visible column above the cryostat. There was no abrupt change in temperature or air currents above the machine or any other readily apparent explanation for the smoke's behavior.

In an attempt to isolate the effect, Podkletnov and his staff suspended various objects over the cryostat. They found that an object's weight dropped by two percent while above the device. Such a decrease in gravitational force — although small — is unimaginably significant.

"We thought it might be a mistake," Dr. Podkletnov said, "but we have taken every precaution."

Podkletnov claimed that thorough testing ruled out the possibility that the antigravity effect was caused by air flow or magnetic fields. The phenomenon was even measurable in a drop in air pressure on every floor of the laboratory in a narrow column directly above the cryostat. The researchers tried suspending one cryostat above another, and found that the weight drop of objects above the two units increased to four percent. This cumulative result suggested that the effect — whatever its cause — might theoretically be refined to produce near or total weightlessness.

Podkletnov coauthored a paper on his team's research, putting forth the hypothesis that the superconductor was somehow blocking the effects of gravity. He submitted the report to the Journal of Physics-D: Applied Physics, a publication of England's Institute of Physics. After reportedly passing "intense scrutiny by skeptical, independent experts," Podkletnov's paper was accepted to be published in the October 1996 edition of the prestigious journal. Despite its seemingly outlandish nature, the antigravity theory was poised for legitimacy in the scientific community.

This was when things began to fall apart. Like a modern-day Icarus, Podkletnov would soon come crashing back down to earth.

WHAT GOES UP...

With his findings set for publication in the scientific community, Podkletnov then

took his story to the popular press. Robert Matthews and Ian Sample broke the news in the Sunday Telegraph on September 1, 1996. Their article, headlined "'Antigravity' device gives science a lift," speculated on the futuristic implications of antigravity technology in terms of space travel and generating electricity, and also indicated that NASA's Marshall Space Flight Center was funding further research into the discovery.

Then on September 9, only days after the grandiose public announcement, Podkletnov requested that his paper be withdrawn from publication in the physics journal. His exact reasons for doing so are not known, but a storm of confusion swirled about the antigravity study in the days between the news article and his decision.

First, a spokesman for the University of Technology in Tampere denied any knowledge of antigravity research ever being conducted there. Prof. Tuomo Tiainen, director of the university's Institute of Materials Science, issued the statement.

Complicating matters further, the scientist credited with coauthoring the paper with Podkletnov stepped forward to deny any involvement in the project. Petri Vuorinen explained that he had worked with Podkletnov years ago, but never on a supposed antigravity machine. Vuorinen claimed to be mystified by his name's inclusion on this paper, and he wished to disavow any association with it.

Reporter Robert Matthews took steps to investigate the bizarre new wrinkles in the story he had just broken. He contacted Podkletnov for his reaction to all the flying denials. Podkletnov still insisted that his research was genuine.

Concerning the university's statement, he explained that Tiainen had only been in his position at Tampere for four months, and thus may have been unaware of research carried out back in 1992. As for his mystery coauthor, Podkletnov suggested that there must be two different people named Petri Vuorinen involved with the institute. The Vuorinen he had worked with now lived in Japan, Podkletnov said. Matthews contested this mistaken-identity scenario as ludicrous, but Podkletnov assured him that his erst-while colleague's first and last names are common in Finland.

Sure enough, as infinitely unlikely as it may seem, there actually was a second Petri Vuorinen working at Tampere! Alas, this one also denied any involvement with Podkletnov's study. Matthews learned that the first Petri Vuorinen had lived in Japan three years ago, but was now back in Finland. Matthews further discovered that a signature appearing to belong to the first Vuorinen appeared on the paper Podkletnov had submitted to the Institute of Physics.

At this point Matthews requested another statement from Prof. Tianen. This time, Tianen hedged a bit on the Podkletnov situation, "denying any involvement — except some years ago — in antigravity research." He stated that Podkletnov had done some valued research at Tampere, and that he was unqualified to judge whether his antigravity claims were of merit or not. To that, Tianen added, "We don't want to get the credit for the result if it is good or bad." He also told Matthews that he would possibly ban Podkletnov from the institute "...If this turns out bad."

The editors of the Journal of Physics-D, meanwhile, were still planning on running the controversial antigravity paper — although they considered postponing it until they could ask Podkletnov to clarify its true authorship, among other points of dispute. They

didn't have to make that decision. Podkletnov contacted the Journal on September 9 and expressed his wish to withdraw the paper from publication. They accepted his request.

Were all the king's horses and all the king's men engaged in a cover-up of Podkletnov's findings?

HEAVY THEORIES

What really happened with Eugene Podkletnov and his antigravity machine? The safest guess is that his story about the discovery was wrong, whether mistakenly or intentionally incorrect. Inaccuracies in his version of what happened led to the confusion from Vuorinen and the university, and later his withdrawal from the physics journal.

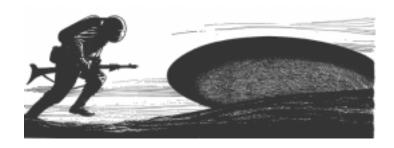
On the other hand, the evidence of Vuorinen's involvement and Tampere's backpedaling on the issue of antigravity research are enticing fodder to anyone looking for a conspiracy. Was there a cover-up, with all the other participants playing dumb as soon as Podkletnov went public? There are reports that certain unnamed "funding agencies" warned Podkletnov against revealing details of the antigravity device until patents could be secured. Given what facts we have, it's hard to decide whether Podkletnov surrendered in embarrassed acknowledgment of fraud, or if he was coerced to see no evil, hear no evil, speak no evil.

Regardless of why he withdrew his paper, let's assume that Podkletnov's device actually worked, or legitimately seemed to. How could such an upheaval of the laws of physics be possible?

One reasonable hypothesis is that Podkletnov was observing not a decrease in gravitational force, but a side-effect of superconductor magnetism. Although he claimed to have eliminated the possibility that a magnetic field caused the two-percent weight drop, there is a well-established magnetic effect associated with superconductivity. Perhaps this phenomenon, or some offshoot of it, escaped Podkletnov's attention in the course of testing.

Another theory is that Podkletnov achieved true antigravity by means of a long-predicted but never recorded implication of Einsteinian physics. The theory of relativity suggests that rapidly spinning objects distort gravitational force. This effect has always been considered too infinitesimal to be measured, but some scientists speculate that the highly accelerated atoms within a spinning superconductor could conceivably magnify the effect to the proportions Podkletnov observed.

In a press statement upon the withdrawal of his paper from publication, Podkletnov said, "This is an important discovery and I don't want it to disappear." It doesn't appear that it will anytime soon. Other scientists are undoubtedly checking out his claims, with NASA and the U.S. government possibly among them. There is already an unconfirmed report of an American science hobbyist who successfully duplicated the antigravity machine with parts ordered from the Edmund's Scientific Catalog. Whatever the facts of this bizarre case may be, we can hope that in time the truth will rise.



THE RAPTURE

SATELLITES WILL PROJECT AN IMAGE OF "GOD" COMPUTER HOLOGRAPHS WILL MAKE THE HEAVENS EXPLODE WITH LIES! BLUE BEAM PROJECT

It involves two things. A technologically simulated "second coming" and the reemmrgence of new "MONTAUK" type projects that have the ability to take up a whole bunch of people as in a "rapture" type of situation and whisk the whole bunch into nevernever land. Ironically, portions of the holographic projections have the potential for changing the planet into oneness with God. Unfortunately, this operates on the premise that Man shall somehow become God in human form and control other Men and dictate all actions and thoughts.

The calculated resistance to the new religion, the New World Order and the new "Messiah" will entail human loss on a massive scale in the ensuing "holy wars". The "BLUE BEAM PROJECT" will pretend to be the universal fulfillment of the prophecies of old; as major an event as that which took place 2000 years ago. In principle, it will make use of the sky as a holographic projection screen for space-based laser-generating satellites (star wars). These projectors will project simultaneous images to the four comers of the planet, in every language by region. It deals with the religious aspect of the NEW WORLD ORDER.

The "system" has already been tested. Holographic projections of the "CHRIST IM-AGE" have already been seen in some remote desert areas. These have only been reported in tabloid papers, so they are instantly rendered moot. They can also project images of alien craft, aliens, monsters, angels - you name it. Computers will coordinate the satellites and software will run the show-and-tell.

Holography is based on very nearly identical signals combining to produce and image, or hologram, with depth perception. This is equally applicable to acoustic (ELF,VLF,LF) waves as it is to optical phenomena. Specifically, the "show" will consist of laser projections of multiple holographic images to different parts of the planet, each receiving different images according to the predominating regional religious faith. Not a single area will be excluded. With computer animation and sound effects appearing to come from the depths of space, astonished followers of the various creeds will witness their own returned Messiah in spectacularly convincing lifelike realness.

The various images of Christ, Mohammed, Buddha, Krishna, etc., will merge into

ONE after "correct explanation" of the mysteries, prophecies and revelations are disclosed. This "ONE GOD" will in fact function as the "Anti-Christ", who will "explain" that the various scriptures "have been misunderstood"- that the religious of old are responsible for turning brother against brother, nation against nation - that the religions of the world must be abolished to make way for the GOLDEN AGE (NEW AGE) of the One World Religion, representing the One God they see before them. Naturally, this superbly staged, full-scale production will result in social and religious disorder on a massive scale. Wonder what the television transmitters of religious networks will be doing on that day? But before all this, they have to go through four different steps in order to get to Project Blue Beam.

1: The first step concerns the breakdown of all archeological knowledge. It deals with staging earthquakes at certain precise locations around the planet where supposed new "discoveries" will finally explain (for them) that the meanings of the basic doctrines of all the world's major religions are "wrong." This falsification will be used to make the population believe that all religious doctrine has been misunderstood and misinterpreted. The falsification started with the film 2001: A Space Oddesy, the TV-series STAR TREK, the STAR WARS films, E.T., all of which deal with space "invasion" and "protection". JU-RASSIC PARK, was to push the theory of evolution. 2: The second step deals with the gigantic space show: 3D optical holograms and sounds, laser projections of multiple holographic images in different parts of the world, each receiving a different image, according to its predetermined original national religious faith. This new "god" image will talk in all languages. As an example, the Soviets have manufactured the advanced computers and have programmed them with the minute psychological particles based upon their studies of the anatomy and biology of the human body, as well as then-studies on the anatomy, chemistry and electricity of the human brain. These computers have also been fed with the different languages of the world.

3: The third step deals with telepathic electronic two-way communication, where ELF(Extra Low Frequency), VLF (Very Low Frequency), and LF (Low Frequency) waves will reach the people of the earth through the insides of their brains, making each person believe that his own God is speaking to him from within his own soul. Such rays, from satellite, are fed from the memory of computers that store much data about the human being and his languages. These rays will then interlace and interweave with the natural thinking processes to form what we call the ARTIFICIAL TALK. 4: The fourth step involves universal supernatural manifestations using electronic means. This step contains three different orientations: The first one is to make mankind believe that an alien invasion is about to occur upon every major city on the earth. This is to push each major nation into using its nuclear capability to strike back. In this manner, it would put each of these nations in a state of full disarmament before the United Nations after the false attack. The second is to make the "Christian" believe that a major rapture is occurring, with a simple "played" divine intervention of an alleged "good" alien force coming to save the good people from a brutal satanic attack. Its goal is to get rid of all significant opposition to the NEW WORLD ORDER.

The third orientation is a mixture of electronic and supernatural forces. The waves (frequencies) used at that time will allow supernatural forces to travel through fiber op-

tics cable, coaxial cable, electric and telephone lines in order to penetrate all electronic equipment and appliances that will by then all have a special microchip installed. The goal of this step deals with the materialization of satanic ghosts, spectres, and poltergeists all across the globe in order to push all populations to the edge of a wave of suicide, killing and permanent psychological disorder.

After that night of the THOUSAND STARS, humanity is believed to be ready for them to enter in a new "messiah" to reestablish peace everywhere at any cost, even at the cost of freedom.

THAT AIN'T ME!

WHEN SEEING AND HEARING ISN'T BELIEVING!

"Gentlemen! We have called you together to inform you that we are going to overthrow the United States government." So begins a statement being delivered by Gen. Carl W. Steiner, former Commander-in-chief, U.S. Special Operations Command.

At least the voice sounds amazingly like him.

But it is not Steiner. It is the result of voice "morphing" technology developed at the Los Alamos National Laboratory in New Mexico.

By taking just a 10-minute digital recording of Steiner's voice, scientist George Papcun is able, in near real time, to clone speech patterns and develop an accurate facsimile. Steiner was so impressed, he asked for a copy of the tape. Steiner was hardly the first or last victim to be spoofed by Papcun's team members. To refine their method, they took various high quality recordings of generals and experimented with creating fake statements. One of the most memorable is Colin Powell stating "I am being treated well by my captors."

"They chose to have him say something he would never otherwise have said," chuckled one of Papcun's colleagues.

A Box of Chocolates is Like War

Most Americans were introduced to the tricks of the digital age in the movie Forrest Gump, when the character played by Tom Hanks appeared to shake hands with President Kennedy.

TX1400L PASSIVE TRANSPONDER

No larger than a grain of rice, the injectable transponder is a passive radio-frequency identification tag. Every human slave of the New World Order will have one of these, or similar, injected at birth. The NWO agencies will know who you are, what you eat, where you go and how many times a month you have sex so you can be tracked, taxed and fined.

For Hollywood, it is special effects. For covert operators in the U.S. military and intelligence agencies, it is a weapon of the future.

"Once you can take any kind of information and reduce it into ones and zeros, you can do some pretty interesting things," says Daniel T. Kuehl, chairman of the Information Operations department of the National Defense University in Washington, the military's school for information warfare.

PSYOPS SEEKS TO EXPLOIT HUMAN VULNERABILITIES IN ENEMY GOVERNMENTS, MILITARIES AND POPULATIONS

Digital morphing-voice, video, and photo-has come of age, available for use in psychological operations. PSYOPS, as the military calls it, seek to exploit human vulnerabilities in enemy governments, militaries and populations to pursue national and battle-field objectives.

To some, PSYOPS is a backwater military discipline of leaflet dropping and radio propaganda. To a growing group of information war technologists, it is the nexus of fantasy and reality. Being able to manufacture convincing audio or video, they say, might be the difference in a successful military operation or coup.

Allah on the Holodeck

Pentagon planners started to discuss digital morphing after Iraq's invasion of Kuwait in 1990. Covert operators kicked around the idea of creating a computer-faked videotape of Saddam Hussein crying or showing other such manly weaknesses, or in some sexually compromising situation. The nascent plan was for the tapes to be flooded into Iraq and the Arab world.

The tape war never proceeded, killed, participants say, by bureaucratic fights over jurisdiction, skepticism over the technology, and concerns raised by Arab coalition partners.

WHAT IF THE U. S. PROJECTED A HOLOGRAPH IMAGE OF ALLAH FLOAT-ING OVER BAGHDAD?

But the "strategic" PSYOPS scheming didn't die. What if the U.S. projected a holographic image of Allah floating over Baghdad urging the Iraqi people and Army to rise up against Saddam, a senior Air Force officer asked in 1990? According to a military physicist given the task of looking into the hologram idea, the feasibility had been established of projecting large, three-dimensional objects that appeared to float in the air.

But doing so over the skies of Iraq? To project such a hologram over Baghdad on the order of several hundred feet, they calculated, would take a mirror more than a mile square in space, as well as huge projectors and power sources. And besides, investigators came back, what does Allah look like?

The Gulf War hologram story might be dismissed were it not the case that washingtonpost.com has learned that a super secret program was established in 1994 to pursue the very technology for PSYOPS application. The "Holographic Projector" is described in a classified Air Force document as a system to "project information power from space ... for special operations deception missions."

Voice-morphing? Fake video? Holographic projection? They sound more like Mission Impossible and Star Trek gimmicks than weapons. Yet for each, there are corresponding and growing research efforts as the technologies improve and offensive information warfare expands.

Whereas early voice morphing required cutting and pasting speech to put letters or words together to make a composite, Papcun's software developed at Los Alamos can far more accurately replicate the way one actually speaks. Eliminated are the robotic intonations.

The irony is that after Papcun finished his speech cloning research, there were no takers in the military. Luckily for him, Hollywood is interested: The promise of creating a virtual Clark Gable is mightier than the sword.

Video and photo manipulation has already raised profound questions of authenticity for the journalistic world. With audio joining the mix, it is not only journalists but also privacy advocates and the conspiracy-minded who will no doubt ponder the worrisome mischief that lurks in the not too distant future.

"We already know that seeing isn't necessarily believing," says Dan Kuehl, "now I guess hearing isn't either." William M. Arkin, author of "The U.S. Military Online," is a leading expert on national security and the Internet. He lectures and writes on nuclear weapons, military matters and information warfare. An Army intelligence analyst from 1974-1978, Arkin currently consults for Washingtonpost Newsweek Interactive, MSNBC and the Natural Resources Defense Council.

Request for Proposal MT 349 Fall 2002 July/August 2000

LYING WITH PIXELS

SEEING IS NO LONGER BELIEVING.

The image you see on the evening news could well be a fake-a fabrication of fast new video manipulation technology.

Last year, Steven Livingston, professor of political communication at George Washington University, astonished attendees at a conference on the geopolitical pros and cons of satellite imagery. He didn't produce evidence of new military mobilizations or global pandemics. Instead, he showed a video of figure skater Katarina Witt during a 1998 skating competition.

In the clip, Witt gracefully plies the ice for about 20 seconds. Then came what is perhaps one of the most unusual sports replays ever seen. The background was the same, the camera movements were the same. In fact, the image was identical to the original in all ways except for a rather important one: Witt had disappeared, along with all signs of her, such as shadows or plumes of ice flying from her skates. In their place was exactly what you would expect if Witt had never been there to begin with - the ice, the walls of the rink and the crowd.

So what's the big deal, you ask. After all, Stalin's staff routinely airbrushed persona non grata out of photos more than a half-century ago. And Woody Allen ushered a variation on reality morphing into the movies 17 years ago with Zelig, in which he inserted himself next to Adolf Hitler and Babe Ruth. In films such as Forrest Gump and Wag the Dog, reality twisting has become commonplace. What sets the Witt demo apart - way apart - is that the technology used to "virtually delete" the skater can now be applied in real time, live, even as a camera records a scene and instantly broadcasts it to viewers. In the fraction of a second between video frames, any person or object moving in the foreground can be edited out, and objects that aren't there can be edited in and made to look real. "Pixel plasticity," Livingston calls it. The implication for those at the satellite imagery conference was sobering: Pictures from orbit may not necessarily be what the satellite's electronic camera actually recorded.

But the ramifications of this new technology reach beyond satellite imagery. As live

electronic manipulation becomes practical, the credibility of all video will become just as suspect as Soviet Cold War photos. The problem stems from the nature of modem video. Live or not, it is made of pixels, and as Livingston says, pixels can be changed. The best-known examples of real-time video manipulation so far are "virtual insertions" in professional sports broadcasts. Last January 30, for instance, nearly one-sixth of humankind in more than 180 countries repeatedly saw an orange first-down line stretched across the gridiron as they watched the Super Bowl. Princeton Video Imaging (PVI) in Lawrenceville, N.J., created that line, stored it in a computer, and inserted it into the live feed of the broadcast. To help determine where to insert the orange pixels, several game cameras were fitted with sensors that tracked the cameras spatial positions and zoom levels. Adding to the illusion of reality was the ability of the PVI system to make sure that players and referees occlude the virtual line when their bodies traverse it.

Last spring and summer, as PVI and rivals such as New York-based Sportvision were airing virtual insertion products, including simulated billboards on walls behind major league batters, a team of engineers from Samoff Corp. in Princeton, N.J., flew to the Coalition Allied Operations Center of NATO's Operation Allied Force in Vicenza, Italy. Their mission: transform their experimental video processing technology into an operational tool for rapidly locating and targeting Serbian military vehicles in Kosovo. The project was dubbed TIGER, for "targeting by image georegistration."

"Our goal was to be able to fire precision-guided munitions at Serbian military vehicles-just dial in the coordinates and the thing goes," explains Michael Hansen, a young, caffeinated Samoff gadgeteer who can hardly believe he was helping fight a war last year.

Compared to PVI's job, the military's technical task was more difficult - and the stakes were much higher. Instead of altering a football broadcast, the TIGER team manipulated a live video feed from a Predator, an unmanned reconnaissance craft flying some 450 meters above Kosovo battlefields. Rather than superimposing virtual lines or ads into sports settings, the task was to overlay, in real time, "georegistered" images of Kosovo onto the corresponding scenes streaming in live from the Predator's video camera.

The terrain images had been previously captured with aerial photography and digitally stored. The TIGER system, which automatically detected moving objects against the background, could almost instantly feed to the targeting officers the coordinates for any piece of Serbian hardware in the Predator's view. This was quite a technical feat, since the Predator was moving and its angle of view was constantly changing, yet those views had to be electronically aligned and registered with the stored imagery in less than one-thirtieth of a second (to match the frame rate of video recording).

Any video that has ever been recorded is becoming clip art that producers can digitally sculpt into the story they want to tell.

In principle, the targeting step could have been hotwired to precision guided weapons. "We weren't actually doing that in Allied Force," Hansen notes. "We were just telling targeting officers exactly where Serbian targets were and then they would vector in planes to go strike the targets."

That way the human decision makers could pre-empt flawed machine-made deci-

sions. According to the Defense Advanced Research Projects Agency, TIGER technology was used extensively in the final three weeks of the Kosovo operation, during which "80 to 90 percent of the mobile targets were hit."

So far, real-time video manipulation has been within the grasp only of technologically sophisticated organizations such as TV networks and the military. But developers of the technology say it's becoming simple and cheap enough to spread everywhere. And that has some observers wondering whether real-time video manipulation will erode public confidence in live television images, even when aired by news outlets. "Seeing may no longer be believing," says Norman Winarsky, corporate vice president for information technology at Samoff. "You may not know what to trust."

THE SUBLIME TO THE RIDICULOUS

A code form of video manipulation already is happening in the satellite imagery community. The weekly publication Space News reported earlier this year that the Indian government releases imagery from its remote-sensing satellites only after defense facilities have been "processed out." In this case, it's not real-time manipulation and it's up front, like a censor's black marker. But pixels are plastic. It is perfectly possible now to insert sets of pixels into satellite imagery data that interpreters would view as battalions of tanks, or war planes, or burial sites, or lines of refugees, or dead cows that activists claim are victims of a biotech accident.

A demo tape supplied by PVI bolsters the point in the prosaic setting of a suburban parking lot. The scene appears ordinary except for a disturbing feature: Amidst the SUVs and minivans are several parked tanks and one armored behemoth rolling incongruously along. Imagine a tape of virtual Pakistani tanks rolling over the border into India pitched to news outlets as authentic, and you get a feel for the kind of trouble that deceptive imagery could stir up.

Commercial suppliers of virtual insertion services are too focused on new marketing opportunities to worry much about geopolitics. They have their eyes on far more lucrative markets. Suddenly those large stretches of programming between commercials - the actual show, that is-become available for billions of dollars worth of primetime advertising. PVI's demo tape, for instance, includes a scene in which a Microsoft Windows box appears-virtually, of course-on the shelf of Frasier Crane's studio. This kind of product placement could become more and more important as new video recording technologies such as TiVo and RePlayTV give viewers more power to edit out commercials.

Dennis Wilkinson, a Porsche-driving, sports-loving marketing expert who became CEO of 10-year-old PVI about a year ago, couldn't be happier about that. Wilkinson's eyes gleam when he describes a (near) future in which virtual insertion technology pushes advertisements to the personalized extreme. Combined with data-mining services by which browsers' individual likes, dislikes and purchasing patterns can be relentlessly tracked and analyzed, virtual insertion opens up the ability to shunt personally targeted advertisements over phone lines or cables to Web users and TV viewers. Say you like Pepsi but your neighbor next door likes Coke and your neighbor across the street likes Seven- Up-the kind of data harvestable from supermarket checkout records. It will become possible to tailor the soft-drink image in the broadcast signal to reach each of you

with your preferred brand.

Just 15 minutes up the road from PVI, Samoff's Winarsky is also glowing-not so much about capturing market share as about the transforming power of the technology. Samoff has a distinguished history in that regard; the company is the descendant of RCA Laboratories, which started innovating in television technology in the early 1940s and has given birth to a plethora of media technologies. The color TV picture tube, liquid crystal displays and high-definition TV all came, at least in part, from RCA qua Samoff, which has five technical Emmys in its lobby.

The ability to manipulate video data in real time, he says, has just as much potential as some of these forerunners. "Now that you can alter video in real time, you have changed the world," he says. That may sound inflated, but after looking at the Katarina Witt demo, Winarsky's talk of "changing the world" loses some of its air of hyperbole.

Deleting people or objects from live video, or inserting prerecorded people or objects into live scenes, is only the beginning of the deceptions becoming possible. Pretty much any piece of video that has ever been recorded is becoming clip art that producers can digitally sculpt into the story they want to tell, according to Eric Haseltine, senior vice president for R&D at Walt Disney Imagineering in Glendale, Calif. With additional video manipulation technologies, previously recorded actors can be made to say and do things they have never actually done or said. "You can have dead actors star again in entirely new movies," says Haseltine.

Contemporary shots featuring footage of dead performers have been around for several years. But the Hollywood illusion-craft that, for example, inserted John Wayne into a TV commercial required painstaking, frame-by-frame post—"production work by skilled technicians. There's a big difference now, says Haseltine: "What used to take an hour [per video frame], now can be done in a sixtieth of a second." This dramatic speedup means that manipulation can be done in real time, on the fly, as a camera records or broadcasts. Not only can John Wayne, Fred Astaire or Saddam Hussein be virtually inserted into pre-produced ads, they could be inserted into, say, a live broadcast of The Drew Carey Show.

The combination of real-time, virtual insertion with existing and emerging post-production techniques opens up a world of manipulative opportunity. Consider Video Rewrite technology, which its developers at the Interval Corp. and the University of California, Berkeley first demonstrated publicly three years ago. With just a few minutes of video of someone talking, their system captures and stores a set of video snapshots of the way that a person's mouth-area looks and moves when saying different sets of sounds. Drawing from the resulting library of "visemes" makes it possible to depict the person seeming to say anything the producers dream up-including utterances that the subject wouldn't be caught dead saying.

In one test application, computer scientist Christoph Bregler, now of Stanford University, and colleagues digitized two minutes of public-domain footage of President John F. Kennedy speaking during the Cuban missile crisis in 1962. Using the resulting viseme library, the researchers created "animations" of Kennedy's mouth saying things he never said, among them, "I never met Forrest Gump." With technology like this, near-future political activists conceivably will be able to orchestrate webcasts of their opponents

saying things that might make Howard Stem sound like a mensch.

Haseltine believes video manipulation techniques will quickly be carried to their logical extreme: "I can predict with absolute certainty," he says, "that one person sitting at a computer will be able to write a script, design characters, do the lighting and wardrobe, do all of the acting and dialog, and post production, distribute it on a broadband network, do all of this on a laptop-and viewers won't know the difference."

THE END OF AUTHENTICITY

So far, the widely witnessed applications of real-time video manipulation have been in benign arenas like sports and entertainment. Already last year, however, the technology began diffusing beyond these venues into applications that raised eyebrows. Last fall, for instance, CBS hired PVI to virtually insert the network's familiar logo all over New York City-on buildings, billboards, fountains and other places-during broadcasts of the network's The Early Show. The New York Times ran a front-page story in January raising questions about the journalistic ethics of altering the appearance of what is really there.

The combination of real-time virtual insertion, cyber- puppeteering, video rewriting and other video manipulation technologies with a mass-media infrastructure that instantly delivers news video worldwide has some analysts worried. "Imagine you are the government of a hypothetical country that wants more international financial assistance," says George Washington University's Livingston. "You might send video of a remote area with people starving to death and it may never have happened," he says.

Haseltine agrees. "I'm amazed that we have not seen phony video," he says, before backpedaling a bit: "Maybe we have. Who would know?"

It's just the sort of scenario played out in the 1998 movie Wag the Dog, in which top presidential aides conspire with a Hollywood producer to televise a virtually crafted war between the United States and Albania to deflect attention from a budding Presidential scandal. Haseltine and others wonder when reality will imitate art imitating reality. The importance of the issue will only intensify as the technology becomes more accessible. What now typically requires an \$80,000 box of electronics the size of a small refrigerator should soon be doable with a palm-sized card (and ultimately a single chip) that fits inside a commercial video recorder, according to Winarsky. "This will be available to people in Circuit City," he says. Consumer gear for virtual video insertion is likely to require a camcorder with a specialized image-processing card or chip. This hardware will take signals from the camera's electronic image sensors and convert them into a form that can be analyzed and manipulated in a computer using appropriate softwarmuch as photo editors at newspapers use Adobe Photoshop and other programs to "clean up" digital image files. A home user might, for instance, insert absent family members into the latest reunion tape or remove strangers they would prefer not to be in the scenebringing Soviet-style historical revisions right into the family den.

Combine the potential erosion of faith in video authenticity with the so-called "CNN effect" and the stage is set for deception to move the world in new ways. Livingston describes the CNN effect as the ability of mass media to go beyond merely reporting what is happening to actually influencing decision-makers as they consider military, in-

ternational assistance and other national and international issues. "The CNN effect is real," says James Currie, professor of political science at the National Defense University at Fort McNair in Washington. "Every office you go into at the Pentagon has CNN on." And that means, he says, that a government, terrorist or advocacy group could set geopolitical events in motion on the strength of a few hours' worth of credibility achieved by distributing a snippet of well-doc- tored video.

A government, terrorist or advocacy group could set geopolitical events in motion with a snippet of well-doctored video. With experience as an army reservist, as a staffer with a top-secret clearance on the Senate's Intelligence Committee, and as a legislative liaison for the Secretary of the Army, Currie has seen governmental decision-making and politicking up close. He is convinced that real-time video manipulation will be, or already is, in the hands of the military and intelligence communities. And while he has no evidence yet that any government or nongovernment organization has deployed video manipulation techniques, real-time or not, for political or military purposes, he has no problem conjuring up disinformation scenarios.

For example, he says, consider the impact of a fabricated video that seemed to show Saddam Hussein "pouring himself a Scotch and taking a big drink of it. You could run it on Middle Eastern television and it would totally undermine his credibility with Islamic audiences." For all the heavy breathing, however, some experts remain unconvinced that real-time video manipulation poses a real threat, no matter how good the technology gets. John Pike, an analyst of the intelligence community for the Federation of American Scientists in Washington, D.C., says the credibility risks are simply too great for governments or serious organizations to get caught attempting to spoof the public. And for the organizations that would be willing to risk it, says Pike, the news folks-knowing just what the technology can do-will become increasingly vigilant.

"If some human rights organization popped up at CNN with some video, particularly an organization they were not familiar with, I would think that [CNN] would consider that radioactive," says Pike. Same goes for nongovernmental organizations (NGOs). "No responsible director of an established organization would authorize such a thing. And they would fire on the spot anyone caught doing it. The stock-in- trade of NGO policy organizations is that ,Äòwe tell the truth. "Even cool heads like Pike, however, concede that the media's fortress of skepticism has an Achilles heel: the Internet. "The issue is not so much your ability to get fake video on CNN, but to get it online," he says. That's because so much Internet content is unfiltered. "This could play into the phenomenon in the news production process where you would not replicate the original report, but you might report that it was reported," says Pike. And that could cascade into a CNN effect. "These are undoubtedly experiments that will be done," Pike says.

The trouble is, says Livingston, it may only take a few such experiments to forever make people question the authenticity of video. That could have enormous repercussions for military, intelligence and news operations. An ironic sociological consequence might emerge: a return to heavier reliance on unmediated face-to-face communication. In the meantime, though, there will undoubtedly be some interesting twists and turns as pixels become ever more plastic. Ivan Amato is a correspondent for National Public Radio and the author of Stuff: The Materials the World Is Made Of a chronicle of cutting-

edge research in materials science.

NASA PROJECT BLUE BEAM

The International Free Press network is not a religious group, neither is it a political organization, but an independent worldwide investigation press agency in the field of politics, economics, medical and military. We specialize in investigating and publishing special reports and audio tapes to expose the underworld of the United Nations conspiracy to implement a New World Order. Our task is to make the people realize that the agenda of the New World Order is not a dream or some wild, paranoid theory; it is a real ongoing Satanic project.

For what?

To abolish all Christian traditional religions in order to replace them with a one world religion based on the cult of man. To abolish all national identity and national pride in order to establish a world identity and a world pride. To abolish the family as known today in order to replace them with individuals all working for the glory of the new one world government.

To destroy all individual artistic and scientific creativity to implement a one world government one-mind sight. And that kind of declaration of war from the United Nations is for the implementation of a universal, obligatory membership to the United Nations, a strengthening of the UN by a multi-military and multi-police force, a worldwide justice department through the UN with an international tribunal, a worldwide new trade agreement for all nations, the end of cold war and local wars as they are today, and the obligation for peace by scrapping all national and state constitutions.

Also, a new world religion and a new culture for all men. If we really wish to understand the NASA Blue Beam Project, we have to return to the "dawning of the age of Aquarius." Remember that song? That song said, "When the moon is in the seventh house and Jupiter aligned with Mars, then peace will guide our planet and love will steer the stars."

This related with the year 1982 to be, at that time, the opening for the conspiracy of the age of Aquarius, just before the implementation of the new world order, supposed to begin sometime in 1983.

I have to say that the Blue Beam Project was set up for the year 1983. It has been delayed; we don't know exactly why. But, since 1983 (eleven years before the publication of this report), they have really improved themselves with new technology and innovations in space hardware and software in which they are involved right now to make their systems possible.

So, the goals of the new age movement under which the United Nations operates right now, are the implementation of a new world "messiah."

The tools of the new world order are, 1. an international army; 2. an international police force; 3. a world bank for the economy; 4. a world government under the United Nations; 5. a world conservatory bank for wilderness preservation around the world. That means all "green" movements will be melded into the new international bank or disappear altogether; 6. a world religion where all church doctrines will be destroyed at the roots to be replaced by the new world religion of the age of Aquarius; 7. the world

seven-races classification for all human slaves who will fulfill predetermined work tasks whether they agree with it or not; 8. the world concentration headquarters at the United Nations for those who will not accept the new system; 9. the world agriculture and food supply control which will control food and vitamin supplies around the world.

The new world order will be an "in-between" government system for USSR, Great Britain and all its commonwealths, and the United States with its melting-pot population. This is, at the end, a new spiritual and political world order which will replace the old ones under which we live right now.

What are the new world order plans?

They plan on the destruction of all people who believe in the Bible or worship Jesus Christ, and the complete disappearance of Christianity. To achieve this plan, the new world order is changing national laws to assure that Christian beliefs and symbols-like the cross, for instance, will become outlawed and unlawful. Religious holidays and ceremonies will be replaced with new age festivities around the world.

The elimination and complete destruction of all secret societies and secret brother-hoods, lodges and sanctuaries, all of which they view as the most serious threats to then-survival after the implementation of the one world religion and one world government.

The new world order also plans the abolition of all national currencies, and the transfer of commerce to electronic cash through the superhighway. The thinkers and the basic doctrine of the new age conspiracies books are:

Elena Petrovna Blavatsky, who wrote "Isis Unveiled" and "The Secret Doctrine."

Alice A. Bailey who wrote "The Race and the Initiation and Externalization of the Hierarchy;" "Initiation: Human and Savior;" "The Reappearance of the Christ." (Their Christ is the new messiah). "The Destiny of the Nation," in which are plans for the disposition of the nation-states; "The Unfinished Autobiography;" "Disciplineship and the New Age;" "Esoteric Psychology."

These books are very important for new age thinkers who are exactly the ones who are conspiring to implement the New World Order.

Also, the writing of Nicola Roerich, who wrote, "Matraia," (that's their new messiah); "Shambala, The Resplendent," and "The Agni Yoga Series."

David Spangler who wrote, "Revelation: The Birth of a New Age," considered as the "bible" inside the new age movement; "Reflections on the Christ," which is related to the Luciferian initiation; "Links With Space," which maintains that offworld aliens are supposed to come to save earthlings from themselves; "Relationship and Identity," "The Love of Manifestation," "New Age Rifts," and "Toward a Planetary Vision," which is directly related to the visions of the new world order, as they plan it to be.

Now...what those people also plan-and I repeat, this is not a dream and is not paranoid thinking, this is real. They plan that in order to accept the new world order, all people must first accept the new age religion; to enter into the new world religion, the Christian will have to abdicate their own beliefs. So, as they said, the initiation will be on a worldwide basis inside the newly organized new Christian church (which will be a reorganized and strictly controlled Masonic temple) occult organization based on a Luciferian initiation. What we have to understand here is that no one will be able to main-

tain their old beliefs and, at the same time, enter into the new age religion. It will be impossible.

For those who will not accept the new world order, who will reject it, the new world order people have already built reeducation concentration camps and, for those camps, they have established what they call the "rainbow classifications" of the new world order prisoners.

The rainbow is considered as the "bridge" leading to the Satanic empire of the new world order.

We already know, for instance, that everyone will have to take an oath to Lucifer in order to cross that bridge into the new age. All who resist that initiation will be sent to detention facilities where they will be separated into different categories, known as the rainbow classification of the new world order prisoners.

- 1. Classification of Christian children, as planned, is to be as human sacrifices where, within the black mass ceremonies, they will forced to participate in any kind of sexual orgies or be kept as sexual slaves.
- 2. Classification of prisoners to be used in medical experiments where drugs and new technologies will be tested on humans.
- Classification of healthy prisoners for the International Organ Donation Center where vital organs will be removed one by one while they are kept alive by mechanical devices.
- 4. Classification of all healthy underground workers. The new world order is basically a worldwide dictatorship based upon the Luciferian religion; a dictatorship with the illusion of democracy. In order to maintain the illusion of democracy, camps and slave labor will be hidden underground in massive colonies that are being built as we write this report.
- 5. Classification of "Uncertain Prisoners." In the international "reeducation" center, political and religious prisoners will be reeducated (by whatever means are required) so that they may repent on international television programs and glorify the virtues of the one world government for the benefit of all humanity.
 - 6. Classification of the International Execution Center. Clear enough!
- 7. Classification seven. We are still waiting on the details of the Seventh Classification, and we are awaiting verification of the colors to be assigned to these classifications of prisoners, but this is the basic agenda of those who have planned the new "paradise" world of the future.

You must understand that when I decided to release, about six months ago, some of their plans and information concerning their most important project, which is the NASA Blue Beam Project, I wasn't certain if I would survive my stand against the new world order's plans to put down on their knees all of the world's cultures and religions. But, now, following my own Christian conscience, my real and deep love for all my unknown brothers and sisters in America and throughout the world, I freely accept to give my life if it has to be the case for the truth, for Jesus Christ, by releasing for the first time, the four major steps of the Satanic Blue Beam Project.

I ask everyone who reads the following descriptions not to be paralyzed by their

natural fears but to spread to everyone the contents of this special report, and to gather together in order to pray and to think and to organize ways to survive the new world order government showdown and power taking, because what we have to understand is that the new world government will not be something permanent, immortal; this is not the case. But what we have to do right now is how to organize to survive such Satanic plans.

EDITOR'S NOTE:

The author of this report and his colleague were both killed only weeks apart; one in Canada and the other while visiting Ireland. Now we must carry on their work.

PROJECT BLUE BEAM

The infamous NASA Blue Beam Project has four different steps in order to implement the new age religion with the Antichrist at its head. We must remember that the new age religion is the very foundation for the new world government, without which religion the dictatorship of the new world order is completely impossible.

I'll repeat that: Without a universal belief in the new age religion, the success of the new world order will be impossible!

That is why the Blue Beam Project is so important to them, but has been so well hidden until now.

The first step concerns the breakdown of all archeological knowledge. It deals with the setup with artificially created earthquakes at certain precise locations on the planet where, supposedly, new discoveries will finally explain to all people the error of all fundamental religious doctrines. The falsification of this information will be used to make all nations believe that their religious doctrines have been misunderstood for centuries and misinterpreted. Psychological preparations for that first step have already been implemented with the film, "2001: A Space Odyssey;" the StarTrek series, and "Star Wars;" all of which deal with invasions from space and the coming together of all nations to repel the invaders. The last films, "Jurrassic Park," deals with the theories of evolution, and claim God's words are lies.

What is important to understand in the first step is that those earthquakes will hit at different parts of the world where scientific and archeological teachings have indicated that arcane mysteries have been buried. By those types of earthquakes, it will possible for scientists to rediscover those arcane mysteries which will be used to discredit all fundamental religious doctrines.

This is the first preparation for the plan for humanity because what they want to do is destroy the beliefs of all Christians and Muslims on the planet. To do that, they need some false "proof" from the far past that will prove to all nations that their religions have all been misinterpreted and misunderstood.

The second step involves a gigantic "space show" with three-dimensional optical holograms and sounds, laser projection of multiple holographic images to different parts of the world, each receiving a different image according to predominating regional national religious faith.

This new "god's" voice will be speaking in all languages.

In order to understand that, we must study various secret services' research done in

the last 25 years. The Soviet's have perfected an advanced computer, even exported them, and fed them with the minute physio-psycological particulars based on their studies of the anatomy and electromechanical composition of the human body, and the studies of the electrical, chemical and biological properties of the human brain.

These computers were fed, as well, with the languages of all human cultures and their meanings. The dialects of all cultures have been fed into the computers from satellite transmissions. The Soviets began to feed the computers with objective programs like the ones of the new messiah. It also seems that the Soviets-the new world order people-have resorted to suicidal methods with the human society by allocating electronic wavelengths for every person and every society and culture to induce suicidal thoughts if the person doesn't comply with the dictates of the new world order. There are two different aspects of step two. The first is the "space show." Where does the space show come from? The space show, the holographic images will be used in a simulation of the ending during which all nations will be shown scenes which will be the fulfillment of that which they desire to verify the prophecies and adversary events. These will be projected from satellites onto the sodium layer about 60 miles above the earth. We see tests every once in a while, but they are called UFOs and "flying saucers." The result of these deliberately staged events will be to show the world the new "christ," the new messiah, Matraia, for the immediate implementation of the new world religion. Enough truth will be foisted upon an unsuspecting world to hook them into the lie. "Even the most learned will be deceived."

The project has perfected the ability for some device to lift up an enormous number of people, as in a rapture, and whisk the entire group into a never-never land. We see tests of this device in the abduction of humans by those mysterious little alien greys who snatch people out of their beds and through windows into waiting "mother ships."

The calculated resistance to the universal religion and the new messiah and the ensuing holy wars will result in the loss of human life on a scale never imagine before in all of human history.

The Blue Beam Project will pretend to be the universal fulfillment of the prophecies of old, as major an event as that which occurred 2,000 years ago. In principle, it will make use of the skies as a movie screen (on the sodium layer at about 60 miles) as space-based laser-generating satellites project simultaneous images to the four comers of the planet in every language and dialect according to the region. It deals with the religious aspect of the new world order and is deception and seduction on a massive scale. Computers will coordinate the satellites and software already in place will run the sky show. Holographic images are based on nearly identical signals combining to produce an image or hologram with deep perspective which is equally applicable to acoustic ELF, VLF and LF waves and optical phenomena.

Specifically, the show will consist of multiple holographic images to different parts of the world, each receiving a different image according to the specific national, regional religion. Not a single area will be excluded. With computer animation and sounds appearing to emanate from the very depths of space, astonished ardent followers of the various creeds will witness their own returned messiahs in convincing lifelike reality.

Then the projections of Jesus, Mohammed, Buddah, Krishna, etc., will merge into

one after correct explanations of the mysteries and revelations will have been disclosed. This one god will, in fact, be the Antichrist, who will explain that the various scriptures have been misunderstood and misinterpreted, and that the religions of old are responsible for turning brother against brother, and nation against nation, therefore old religions must be abolished to make way for the new age new world religion, representing the one god Antichrist they see before them.

Naturally, this superbly staged falsification will result in dissolved social and religious disorder on a grand scale, each nation blaming the other for the deception, setting loose millions of programmed religious fanatics through demonic possession on a scale never witnessed before.

In addition, this event will occur at a time of profound worldwide political anarchy and general tumult created by some worldwide catastrophe. The United Nation even now plans to use Beethovan's "Song of Joy" as the anthem for the introduction for the new age one world religion. If we put this space show in parallel with the star wars program we get this: combination of electromagnetic radiation and hypnosis have also been the subject of intensive research. In 1974, for instance, researcher G. F. Shapits, said of one of the research proposals that, "...in this investigation it will be shown that the spoken words of the hypnotist may also be converted by electromagnetic energy directly and to the subconscious part of the human brain without employing any mechanical device for receiving or transcording the message, and without the person exposed to such influence having a chance to control the information input consciously. It may be expected that the rationalized behavior will be considered to have been taken out of their own free will."

Anyone investigating so-called "channelling" phenomena right now would be wise to take this area of research into consideration. It will be noted that those who think of themselves as "channelers" has escalated rapidly since this type of research was conducted.

It is uncanny how similar their messages are, despite which entity they claim to be their source of divine guidance. It would suggest any individual considering the credibility of channelled information should be discerning and critically evaluate where the message they are receiving originates, and if the messages are specifically beneficially to the new world order.

The Sydney Morning newspaper published an item on March 21st, 1983 which announced that the Soviets were invading the human mind, the article having been submitted to the foreign editor by Doctor Nathan Abnuengy <sp>, assistant professor in the faculty of agriculture in Asia. It is worth quoting the article at length even though his grammar is a little old.

This article relates to the Soviets who created the supercomputer we were discussing earlier and which is really important because these types of computers can be run through satellites and through space. The computers were fed with all the different languages and their meanings, the dialect of all peoples were fed to the computers with objective programs.

But we are no longer talking about the Soviets; we are talking about the United Na-

tions, the minions of the new world order, who are feeding the computers with the necessary information.

The editor of the column in which the article appeared even states that the piece made points too important to ignore. I think it is possible that the persons who have created this mega-mind control program could sell the software to an organization and not be aware that the client might use the program and data to enslave all of humankind. Just imagine how far they have advanced since that article was published!

The advancement of techniques propel us toward the third step in the Blue Beam Project that goes along with the telepathic and electronically augmented two-way communication where ELF, VLF and LF waves will reach each person from within his or her own mind, convincing each of them that their own god is speaking to them from the very depths of their own soul.

Such rays from satellites are fed from the memories of computers that have stored massive data about every human on earth, and their languages. The rays will then interlace with their natural thinking to form what we call diffuse artificial thought.

That kind of technology goes into the 1970s, 1980s, and 1990s research where the human brain has been compared to a computer. Information is fed in, processed, integrated and then a response is formulated and acted upon.

Mind controllers manipulate information the same way a computer for grammar manipulates information. In January 1991, the University of Arizona hosted a conference entitled, "The NATO Advanced Research Workshop on Current and Emergent Phenomena and Biomolecular Systems." What does that mean exactly?

It means this: We refer to one paper that was delivered at the conference which stands out for its different attitude towards the development under discussion at that time. It was, in effect, a protest and chilling warning to the attending scientists about the potential abuse of their research findings. Their findings, of course, stated that the United States has already developed communications equipment which can make the blind see, the deaf hear and the lame walk. It can relieve the terminally ill from pain without the use of drugs or surgery. I'm not talking about science fiction. A man might retain the use of all his faculties right up to the moment of his death. This communications equipment depends upon a completely new way of looking at the human brain and neuromuscular systems and radiation pulses at ultra-low frequencies.

Some of this equipment is now operational within the Central Intelligence Agency (CIA), and Federal Bureau of Investigation. It will never be used to make the blind see, the deaf hear and the lame walk because it is central to the domestic political agenda and foreign policy of George Bush and his puppetmasters of the new world order.

Domestically, the new communications equipment is being used to torture and murder person who match profiles imagined to be able to screen a given population for terrorists; to torture and murder citizens who belong to organizations which promote tolerance and peace and development in Central America; to torture and murder citizens who belong to organizations who oppose the development and deployment of nuclear weapons, and to create a race of slave cult automatons, or what is popularly called "the Manchurian Candidates."

Overseas experimentation is taking place on hostages held by the United States and Canada, Great Britain, Australia, Germany, Finland and France. Additionally, there has been a long series of bizarre suicides among British computer scientists, all of whom have had some connection to the United States Navy. What it is possible to ask before such a psychology of terror is this: would any government, corporation or psychiatrist wilfully promote such horror today?

The answer is quite obviously, "Yes." Government agencies and the corporations that work with them toward new world order are prepared to promote anything that will help them achieve their objective of total social control. As for the question of why: For one thing, if you terrify the public and make them fear for their safety, they will allow you to implement draconian law enforcement practice, disarm them and keep extensive records on them, and they only have to tell you that it is all to protect you, of course.

Secondly, it promotes the decay of the present democratic forms of political systems, and leads societies to search for alternative methods of political ideology. Of course, the alternative has already been planned. It is called the new world order and it will not have your safety or interests at heart. As George Bush said: "Read my lips."

Fear has always been used by powerful elite to control and subjugate the masses. The old maxim, divide and conquer is being played out to the limit worldwide to ensure that everyone is frightened for their personal safety, and to be suspicious of everyone else. This, too, is mind control. To go further in regard to the new technology which is at the base of the NASA Blue Beam Project, we have to consider this statement by psychologist James V. McConnell which was published in a 1970s issue of Psychology Today. He said, "The day has come when we can combine sensory deprivation with drug hypnosis and astute manipulation of reward and punishment to gain almost absolute control over an individual's behavior. It should then be possible to achieve a very rapid and highly effective type of positive brainwashing that would allow us to make dramatic changes in a person's behavior and personality."

Now, when we talked before about that kind of ray and the telepathic and electronically augmented communication, the kind of rays that are fed from the memories of computers which store massive data about humans, human language and dialects, and we said that the people will be reached from within, making each person to believe that his own god is speaking directly from within his or her own soul, we refer to that kind of technology and that kind of thinking that same psychologist was espousing, that is: we should be trained from birth that we should all do what society wants us to do rather than what we want to do for ourselves; that because they have the technology to do it, no one should now be allowed to have their own individual personality. This statement and these ideas are important because it is the basic teaching of the United Nations that no one owns his or her own personality. And that same psychologist claims that no one has any say-so about the kind of personality they acquire and there is no reason to believe you have the right to refuse to acquire a new personality if your old personality is considered "antisocial."

What is important in this declaration is that the new world order will be set up over the current system, meaning the old way of thinking and behavior and religion will be considered the "old" and incorrect way of thinking and that they can change it at one of

the eradication camps of the United Nations to make sure that anyone with this "antisocial" behavior will be disposed of quickly so that other modified individuals will be able to fulfill the needs and agendas of the new world order without being distracted by the truth. Could this be the greatest mind control project ever? The NASA Blue Beam Project is the prime directive for the new world order's absolute control over the populations of the entire earth. I would suggest you investigate this information carefully before dismissing it as fanatic lunacy.

If we go further in the different reports we have presented, we find that the mind control operations and technology include a transmitter that broadcasts at the same frequency as the human nervous system, which transmitter is manufactured by the Loral Electro-Optical System in Pasadena, California.

Loral, a major defense contractor, has previously conducted research on directed energy weapons for Lt. Gen. Leonard Perez of the U. S. Airforce who was searching for a weapon that could implant messages into the minds of the enemy while urging his own troops on to superhuman deeds of valor!

The device employs electromagnetic radiation of gigahertz frequencies pulsed at extremely low frequencies (ELF).

It is used to torture people both physically and mentally from a distance. Weapons of this type are thought to have been used against a British woman protesting the presence of American Cruise Missiles at Greenham Common Airbase during the 1970s.

This weapon can be used to induce total sensory deprivation by broadcasting signals into the auditory nerve at such high power that it blocks the ability of the individual to hear themselves think!

The process employed by such ELF technology are described in various U. S. Defense Department publications, including one entitled, "The Electromagnetic Spectrum and Low Intensity Conflict," by Captain Paul E. Tyler, Medical Commandant, U. S. Navy, which is included in a collection entitled, "Low Intensity Conflict and Modem Technology Edict," by Lt. Col David G. Dean, USAF.

The paper was delivered in 1984 and the collection published 1986 by Air University Press, Maxwell Airforce Base, Alabama.

Another pulse microwave device can deliver audible signals directly to an individual while remaining undetectable to anyone else. The technology is very simple and can be built by using an ordinary police radar gun. The micro-wave beam generated by the device is modulated at audio frequencies and can broadcast messages directly into the brain.

Now here we come to the NASA Blue Beam Project.

The broadcasting of subliminal two-way communication and images from the depths of space correspond directly to that kind of technology.

In his book, "The Body Electric," Nobel Prize nominee Robert Baker describes a series of experiments conducted in the early 1960s by Allen Frie where this phenomena was demonstrated as well as later experiments conducted in 1973 at the Walter Reed Army Institute of Research by Dr. Joseph C. Sharp who personally underwent tests in which he proved he could hear and understand messages delivered to him in an echo-

free isolation chamber via a pulsed micro- wave audiogram which is an analog of the word's sound vibration beamed into his brain.

Baker then goes on to state, "Such a device has obvious application for covert operations designed to drive a target crazy with unknown voices or deliver undetectable instructions to a programmed assassin."

Now figure out when we hear that voice from the new world messiah who would be speaking from space to all of the sane people of the earth who might give instructions to zealots and religious fanatics, we would see hysteria and social mayhem on a scale never witnessed before on this planet.

No police forces in the world, even as a combinedfront, could deal with the disorder that will follow!

A 1978 book entitled, "Microwave Auditory Effect and Application," by James C. Lynn describes how audible voices can be broadcast directly into the brain. This technology could actually allow the blind to see and the deaf to hear. Instead, it has been turned into a weapon to enslave the world.

Allen Frie also reports that he could speed up, slow down or stop the hearts of isolated frogs by synchronizing the pulsed rate of a microwave beam with the heart itself. According to Robert Baker, similar results have been obtained using live frogs, which shows that it is technically feasible to produce heart attacks with rays designed to penetrate the human chest.

EDITOR'S NOTE: Both the author of this report and his research colleague died of "heart attacks" only days apart. Neither had a history of heart problems. I should mention also that Dr. Baker does NOT participate in such research.

It has been demonstrated that focused ultra high frequency UHF electromagnetic energy beams can be used to induce considerable agitation and muscular activity or induce muscular weakness and lethargy.

Microwaves can also be used to bum human skin and aid the effect of dmgs, bacteria and poisons or affect the function of the entire brain. These effects were all revealed at length by the CIA on September 21, 1977 in testimony before the Subcommittee on Health and Scientific Research.

Dr. Sidney Gottlieb, who directed the MK-Ultra program at that time was forced to discussed the scope of the CIA's research to find techniques of activation of the human organism by remote electronic means.

So this is something that exists right now, that has been pursued to its highest degree, that can be used from space to reach any person, anyplace on the face of the earth. If we go deeper in that process of mind control over the people we find that the equipment and technology has been used to influence politics in a much more direct fashion.

Michael Dukakis, the Democrat candidate running against George Bush in the 1988 election was targeted with microwave technology in order to impede his public speaking performance once the public opinion polls showed he posed a serious threat to Bush's election prospects. He also claims that the equipment was used against Kitty Dukakis and drove her to the brink of suicide.

In the Disneyland world of U.S. politics, a presidential candidate with problems such

as these, would obviously lose their race to the White House.

In the December 1980 edition of the U. S. Army Journal, called the Military Review, a column by Lt. Col John B. Alexander, entitled, "The New Mental Battlefield: Beam Me Up, Spock," provides further insight into the technical capabilities at the disposal of the comptroller. He writes, "Several examples will demonstrate areas in which progress have been made. The transference of energy from one organism to another; the ability to heal or cause disease to be transmitted over a distance, thus inducing illness or death from no apparent cause-, telepathic behavior modification which includes the ability to induce hypnotic states up to a distance of 1,000 kilometers have been reported. The use of telepathic hypnosis also holds great potential. This capability could allow agents to be deeply planted with no conscious knowledge of their programming. In movie terms, the Manchurian Candidate lives, and does not even require a telephone call.

"Other mind-to-mind induction techniques are being considered. If perfected this capability could allow the direct transference of thought via telepathy from one mind or group of minds to a select target audience. The unique factor is that the recipient will not be aware that thought has been implanted from an external source. He or she will believe the thoughts are original."

This is exactly what we were talking about.

The third step in the NASA Blue Beam Project is called the Telepathic Electronic Two-Way Communication. Lt. Col Alexander's article continues: "If it is possible to feed artificial thought into the multigenic field via satellite, the mind control of the entire planet is now possible. An individual's only resistance would be to constantly question the motivation behind their thoughts and not act upon thoughts which they consider to be outside their own ideological, religious and moral boundaries."

Once again, it is wise to consider how television, advertising, modem education and various types of social pressure are used to manipulate those boundaries.

It has been reported by Lt. Col Alexander who said, in the summary of his Military Review article, "The information on those kinds of technologies presented here would be considered by some to be ridiculous since it does not conform to their view of reality. But some people still believe the world is flat."

Now, this means a lot, because if people do not believe this kind of technology is possible, or that it is science fiction, those people put themselves in great jeopardy, because on the night when those thousand stars will shine from space, during the night when the new messiah will be presented to the world, they will not be prepared and will have no time to prepare to save themselves against that kind of technology. They don't believe and they won't take time to prepare.

Step Four of the NASA Blue Beam Project. The fourth step concerns the universal supernatural manifestation with electronic means. It contains three different orientations. One is to make mankind believe that an alien (off-world) invasion is about to occur at every major city on earth in order to provoke each major nation to use its nuclear weapons in order to strike back. This way, the United Nations Court will require that all those nations which launched nuclear weapons to disarm when the invasion is shown to have been false.

And how will the United Nations know that the invasion was false? They will have staged it, of course.

The second is to make the Christians believe that the rapture is going to occur with the supposed divine intervention of an alien (offworld) civilization coming to rescue earthlings from a savage and merciless demon. Its goal will be to dispose of all significant opposition to the implementation of the new world order in one major stroke, actually within hours of the beginning of the sky show!

The third orientation in the fourth step is a mixture of electronic and supernatural forces. The waves used at that time will allow "supernatural forces" to travel through optical fibers, coaxial cables (TV) electrical and phone lines in order to penetrate to everyone at once through major appliances. Embedded chips will already be in place. The goal of this deals with global Satanic ghosts projected all around the world in order to push all populations to the edge of hysteria and madness, to drown them into a wave of suicide, murder and permanent psychological disorders. After the night of the thousand stars, worldwide populations will be ready for the new messiah to reestablish order and peace at any cost, even at the cost of abdication of freedom.

The techniques used in the fourth step is exactly the same used in the past in the USSR to force the people to accept Communism. The same technique will be used by the United

Nations to implement the new world religion and the new world order.

A lot of people ask when this is going to happen and how they will accomplish the visions of the night of a thousand stars, and the events that will point to the days when it will begin.

According to the many reports we have received, we believe it will begin with some kind of worldwide economic disaster. Not a complete crash, but enough to allow them to introduce some kind of in-between currency before they introduce their electronic cash to replace all paper or plastic money.

The in-between currency will be used to force anyone with savings to spend or turn in their cash because they understand that people who have money and are not dependent upon them might be the very ones who will mount an insurrection against them. If everyone is broke, no one can fund a war of any kind paper currency will cease to exist.

This is one of the first signs.

But to implement the worldwide electronic money system, everyone in the world who might have money in the future, will have to have a way to transfer money electronically. Before that time, everyone will have spent, before the year 2,000, all of their cash, reserves and assets. Everyone has to be 100% dependent upon the Council for their existence.

To prevent any kind of independence, the new world order has already implanted micro chips in wild animals, birds, fish, etc. Why? They want to make certain that the people who will not accept the new world order will not be able to hunt or fish any where in the world. If they try, they will be tracked and traced by satellites, then hunted down and imprisoned or killed.

The new world order is already changing the laws of all nations to make everyone

dependent upon a single food and vitamin supply. They are changing laws about religion and psychiatric disorders in order to identify anyone who is potentially threatening to the NWO. Those who are found defective will be sent to eradication camps where their organs will be taken and sold to the highest bidders. Those who are not killed outright will be used as slave labor or used in medical experiments.

The goal of a dictatorship is to control everyone, everywhere on the planet, ruth-lessly and without exception. That's why the new technology being introduced everywhere is a technologyfor the control of the people. The technology of the 1940s and 1950s was used to help the people have an easier and more productive life. The new technology is designed and built to track down and control people everywhere. This technology is being manufactured for a specific purpose and to refuse to see and recognize that purpose, which is to enslave the entire populations of the world, is to deny the emergence of the Antichrist and the establishment of the new world order religion and government.

If you cannot see, if you cannot learn, if you cannot understand, then you and your family and friends will succumb to the fires of the crematoria that have been built in every state and every major city on earth, built to deal with you.

No one is safe in a totalitarian police state!

THE MIND HAS NO FIREWALL

"David Esur" - a military soldier who actually released secrets from the NSA (it is believed). Last reported as "he is worried for his life" because of releasing it, he has disappeared from my email list. But then again, I never really was able to contact him to begin with - he contacted me, once. He released:

"Subliminal Implanted Posthypnotic Suggestions and Scripts Using Acoustically Delivered and Phonetically Accelerated Posthypnotic Commands without Somnambulistic Preparation in the Subject for Intelligence and Counterintelligence Applications by the United States National Security Agency."

I think he disappeared....like Ross Adey.... and I think that the writer of the article below, Timothy Thomas, may have too. But who knows?

Foreign Military Studies Office 101 Meade Ave Fort Leavenworth, KS 66027-1351

WARNING! The views expressed in FMSO publications and reports are those of the authors and do not necessarily represent the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

THE MIND HAS NO FIREWALL

Mr. Timothy L. Thomas Foreign Military Studies Office, Fort Leavenworth, KS.

This article first appeared in the Spring 1998 issue of Parameters

"It is completely clear that the state which is first to create such weapons will achieve incomparable superiority." -

Major I. Chemishev, Russian Army 1

The human body, much like a computer, contains myriad data processors. They include, but are not limited to, the chemical-electrical activity of the brain, heart, and peripheral nervous system, the signals sent from the cortex region of the brain to other

parts of our body, the tiny hair cells in the inner ear that process auditory signals, and the light- sensitive retina and cornea of the eye that process visual activity. 2 We are on the threshold of an era in which these data processors of the human body may be manipulated or debilitated. Examples of unplanned attacks on the body's data-processing capability are well-documented. Strobe lights have been known to cause epileptic seizures. Not long ago in Japan, children watching television cartoons were subjected to pulsating lights that caused seizures in some and made others very sick.

Defending friendly and targeting adversary data-processing capabilities of the body appears to be an area of weakness in the US approach to information warfare theory, a theory oriented heavily toward systems data processing and designed to attain information dominance on the battlefield. Or so it would appear from information in the open, unclassified press. This US shortcoming may be a serious one, since the capabilities to alter the data processing systems of the body already exist. A recent edition of U.S. News and World Report highlighted several of these "wonder weapons" (acoustics, microwaves, lasers) and noted that scientists are "searching the electromagnetic and sonic spectrums for wavelengths that can affect human behavior." 3 A recent Russian military article offered a slightly different slant to the problem, declaring that "humanity stands on the brink of a psychotropic war" with the mind and body as the focus. That article discussed Russian and international attempts to control the psycho-physical condition of man and his decision making processes by the use of VHF-generators, "noiseless cassettes," and other technologies.

An entirely new arsenal of weapons, based on devices designed to introduce subliminal messages or to alter the body's psychological and data processing capabilities, might be used to incapacitate individuals. These weapons aim to control or alter the psyche, or to attack the various sensory and data-processing systems of the human organism. In both cases, the goal is to confuse or destroy the signals that normally keep the body in equilibrium.

This article examines energy-based weapons, psychotropic weapons, and other developments designed to alter the ability of the human body to process stimuli. One consequence of this assessment is that the way we commonly use the term "information warfare" falls short when the individual soldier, not his equipment, becomes the target of attack.

Information Warfare Theory and the Data-Processing Element of Humans

In the United States the common conception of information warfare focuses primarily on the capabilities of hardware systems such as computers, satellites, and military equipment which process data in its various forms. According to Department of Defense Directive S-3600. 1 of 9 December 1996, information warfare is defined as "an information operation conducted during time of crisis or conflict to achieve or promote specific objectives over a specific adversary or adversaries." An information operation is defined in the same directive as "actions taken to affect adversary information and information systems while defending one's own information and information systems." These "information systems" lie at the heart of the modernization effort of the US armed forces and other countries, and manifest themselves as hardware, software, communications capabilities, and highly trained individuals. Recently, the US Army conducted a mock

battle that tested these systems under simulated combat conditions.

US Army Field Manual 101-5-1, Operational Terms and Graphics (released 30 September 1997), defines information warfare as "actions taken to achieve information superiority by affecting a hostile's information, information based-processes, and information systems, while defending one's own information, information processes, and information systems." The same manual defines information operations as a "continuous military operation within the military information environment that enables, enhances, and protects friendly forces' ability to collect, process, and act on information to achieve an advantage across the full range of military operations. [Information operations include] interacting with the Global Information Environment. . . and exploiting or denying an adversary's information and decision capabilities." 4

This "systems" approach to the study of information warfare emphasizes the use of data, referred to as information, to penetrate an adversary's physical defenses that protect data (information) in order to obtain operational or strategic advantage. It has tended to ignore the role of the human body as an information- or data-processor in this quest for dominance except in those cases where an individual's logic or rational thought may be upset via disinformation or deception. As a consequence little attention is directed toward protecting the mind and body with a firewall as we have done with hardware systems. Nor have any techniques for doing so been prescribed. Yet the body is capable not only of being deceived, manipulated, or misinformed but also shut down or destroyedjust as any other data-process- ing system. The "data" the body receives from external sources-such as electromagnetic, vortex, or acoustic energy waves-or creates through its own electrical or chemical stimuli can be manipulated or changed just as the data (information) in any hardware system can be altered. The only body-related information warfare element considered by the United States is psychological operations (PSYOP). In Joint Publication 3-13.1, for example, PSYOP is listed as one of the elements of command and control warfare. The publication notes that "the ultimate target of [information warfare] is the information dependent process, whether human or automated Command and control warfare (C2W) is an application of information warfare in military operations.... C2W is the integrated use of PSYOP, military deception, operations security, electronic warfare and physical destruction." 5

One source defines information as a "nonaccidental signal used as an input to a computer or communications system." 6 The human body is a complex communication system constantly receiving nonaccidental and accidental signal inputs, both external and internal. If the ultimate target of information warfare is the information-dependent process, "whether human or automated," then the definition in the joint publication implies that human data-processing of internal and external signals can clearly be considered an aspect of information warfare. Foreign researchers have noted the link between humans as data processors and the conduct of information warfare. While some study only the PSYOP link, others go beyond it. As an example of the former, one recent Russian article described offensive information warfare as designed to "use the Internet channels for the purpose of organizing PSYOP as well as for ,Äòearly political warning' of threats to American interests." 7 The author's assertion was based on the fact that "all mass media are used for PSYOP . . . [and] today this must include the Internet." The

author asserted that the Pentagon wanted to use the Internet to "reinforce psychological influences" during special operations conducted outside of US borders to enlist sympathizers who would accomplish many of the tasks previously entrusted to special units of the US armed forces.

Others, however, look beyond simple PSYOP ties to consider other aspects of the body's data-processing capability. One of the principal open source researchers on the relationship of information warfare to the body's data-processing capability is Russian Dr. Victor Solntsev of the Baumann Technical Institute in Moscow. Solntsev is a young, well-intentioned researcher striving to point out to the world the potential dangers of the computer operator interface. Supported by a network of institutes and academies, Solntsev has produced some interesting concepts. 8 He insists that man must be viewed as an open system instead of simply as an organism or closed system. As an open system, man communicates with his environment through information flows and communications media. One's physical environment, whether through electromagnetic, gravitational, acoustic, or other effects, can cause a change in the psycho-physiological condition of an organism, in Solntsev's opinion. Change of this sort could directly affect the mental state and consciousness of a computer operator. This would not be electronic war or information warfare in the traditional sense, but rather in a nontraditional and non-US sense. It might encompass, for example, a computer modified to become a weapon by using its energy output to emit acoustics that debilitate the operator. It also might encompass, as indicated below, futuristic weapons aimed against man's "open system."

Solntsev also examined the problem of "information noise," which creates a dense shield between a person and external reality. This noise may manifest itself in the form of signals, messages, images, or other items of information. The main target of this noise would be the consciousness of a person or a group of people. Behavior modification could be one objective of information noise; another could be to upset an individual's mental capacity to such an extent as to prevent reaction to any stimulus. Solotsev concludes that all levels of a person's psyche (subconscious, conscious, and "superconscious") are potential targets for destabilization. According to Solntsev, one computer virus capable of affecting a person's psyche is Russian Virus 666. It manifests itself in every 25th frame of a visual display, where it produces a combination of colors that allegedly put computer operators into a trance. The subconscious perception of the new pattern eventually results in arrhythmia of the heart. Other Russian computer specialists, not just Solntsev, talk openly about this "25th frame effect" and its ability to subtly manage a computer user's perceptions. The purpose of this technique is to inject a thought into the viewer's subconscious. It may remind some of the subliminal advertising controversy in the United States in the late 1950s. US Views on "Wonder Weapons":

ALTERING THE DATA-PROCESSING ABILITY OF THE BODY

What technologies have been examined by the United States that possess the potential to disrupt the data-processing capabilities of the human organism? The 7 July 1997 issue of U.S. News and World Report described several of them designed, among other things, to vibrate the insides of humans, stun or nauseate them, put them to sleep, heat them up, or knock them down with a shock wave. 9 The technologies include dazzling

lasers that can force the pupils to close; acoustic or sonic frequencies that cause the hair cells in the inner ear to vibrate and cause motion sickness, vertigo, and nausea, or frequencies that resonate the internal organs causing pain and spasms; and shock waves with the potential to knock down humans or airplanes and which can be mixed with pepper spray or chemicals. 10

With modification, these technological applications can have many uses. Acoustic weapons, for example, could be adapted for use as acoustic rifles or as acoustic fields that, once established, might protect facilities, assist in hostage rescues, control riots, or clear paths for convoys. These waves, which can penetrate buildings, offer a host of opportunities for military and law enforcement officials. Micro-wave weapons, by stimulating the peripheral nervous system, can heat up the body, induce epileptic-like seizures, or cause cardiac arrest. Low-frequency radiation affects the electrical activity of the brain and can cause flu-like symptoms and nausea. Other projects sought to induce or prevent sleep, or to affect the signal from the motor cortex portion of the brain, overriding voluntary muscle movements. The latter are referred to as pulse wave weapons, and the Russian government has reportedly bought over 100,000 copies of the "Black Widow" version of them. 11

However, this view of "wonder weapons" was contested by someone who should understand them. Brigadier General Larry Dodgen, Deputy Assistant to the Secretary of Defense for Policy and Missions, wrote a letter to the editor about the "numerous inaccuracies" in the U.S. News and World Report article that "misrepresent the Department of Defense's views." 12 Dodgen's primary complaint seemed to have been that the magazine misrepresented the use of these technologies and their value to the armed forces. He also underscored the US intent to work within the scope of any international treaty concerning their application, as well as plans to abandon (or at least redesign) any weapon for which countermeasures are known. One is left with the feeling, however, that research in this area is intense. A concern not mentioned by Dodgen is that other countries or nonstate actors may not be bound by the same constraints. It is hard to imagine someone with a greater desire than terrorists to get their hands on these technologies. "Psycho-terrorism" could be the next buzzword.

Russian Views on "Psychotropic War" The term "psycho-terrorism" was coined by Russian writer N. Anisimov of the Moscow Anti-Psychotronic Center. According to Anisimov, psychotropic weapons are those that act to "take away a part of the information which is stored in a man's brain. It is sent to a computer, which reworks it to the level needed for those who need to control the man, and the modified information is then reinserted into the brain." These weapons are used against the mind to induce hallucinations, sickness, mutations in human cells, "zombification," or even death. Included in the arsenal are VHF generators, X-rays, ultrasound, and radio waves. Russian army Major I. Chemishev, writing in the military journal Orienteer in February 1997, asserted that "psy" weapons are under development all over the globe. Specific types of weapons noted by Chemishev (not all of which have prototypes) were:

A psychotropic generator, which produces a powerful electromagnetic emanation capable of being sent through telephone lines, TV, radio networks, supply pipes, and incandescent lamps.

An autonomous generator, a device that operates in the 10-150 Hertz band, which at the 10-20 Hertz band forms an infJasonic oscillation that is destructive to all living creatures.

A nervous system generator, designed to paralyze the central nervous systems of insects, which could have the same applicability to humans.

Ultrasound emanations, which one institute claims to have developed. Devices using ultrasound emanations are supposedly capable of carrying out bloodless internal operations without leaving a mark on the skin. They can also, according to Chemishev, be used to kill.

Noiseless cassettes. Chemishev claims that the Japanese have developed the ability to place infra-low frequency voice patterns over music, patterns that are detected by the subconscious. Russians claim to be using similar "bombardments" with computer programming to treat alcoholism or smoking.

The 25th-frame effect, alluded to above, a technique wherein each 25th frame of a movie reel or film footage contains a message that is picked up by the subconscious. This technique, if it works, could possibly be used to curb smoking and alcoholism, but it has wider, more sinister applications if used on a TV audience or a computer operator.

Psychotropics, defined as medical preparations used to induce a trance, euphoria, or depression. Referred to as "slow-acting mines," they could be slipped into the food of a politician or into the water supply of an entire city. Symptoms include headaches, noises, voices or commands in the brain, dizziness, pain in the abdominal cavities, cardiac arrhythmia, or even the destruction of the cardiovascular system.

There is confirmation from US researchers that this type of study is going on. Dr. Janet Morris, coauthor of The Warrior's Edge, reportedly went to the Moscow Institute of Psycho correlations in 1991. There she was shown a technique pioneered by the Russian Department of Psycho-Correction at Moscow Medical Academy in which researchers electronically analyze the human mind in order to influence it. They input subliminal command messages, using key words transmitted in "white noise" or music. Using an infra-sound, very low frequency transmission, the acoustic psycho-correction message is transmitted via bone conduction. 13

In summary, Chemishev noted that some of the militarily significant aspects of the "psy" weaponry deserve closer research, including the following nontraditional methods for disrupting the psyche of an individual:

ESP research: determining the properties and condition of objects without ever making contact with them and "reading" peoples' thoughts.

Clairvoyance research: observing objects that are located just beyond the world of the visible-used for intelligence purposes.

Telepathy research: transmitting thoughts over a distance-used for covert operations.

Telekinesis research: actions involving the manipulation of physical objects using thought power, causing them to move or break apart-used against command and control systems, or to disrupt the functioning of weapons of mass destruction.

Psychokinesis research: interfering with the thoughts of individuals, on either the

strategic or tactical level While many US scientists undoubtedly question this research, it receives strong support in Moscow. The point to underscore is that individuals in Russia (and other countrie as well) believe these means can be used to attack or steal from the data-processing unit of the human body.

Solutsev's research, mentioned above, differs slightly from that of Chemishev. For example, Solntsev is more interested in hardware capabilities, specifically the study of the information-energy source associated with the computer- operator interface. He stresses that if these energy sources can be captured and integrated into the modem computer, the result will be a network worth more than "a simple sum of its components." Other researchers are studying high-frequency generators (those designed to stun the psyche with high frequency waves such as electromagnetic, acoustic, and gravitational); the manipulation or reconstruction of someone's thinking through planned measures such as reflexive control processes; the use of psychotronics, parapsychology, bioenergy, bio fields, and psycho energy; 14 and unspecified "special operations" or anti-ESP training.

The last item is of particular interest. According to a Russian TV broadcast, the strategic rocket forces have begun anti-ESP training to ensure that no outside force can take over command and control functions of the force. That is, they are trying to construct a firewall around the heads of the operators.

CONCLUSIONS

At the end of July 1997, planners for Joint Warrior Interoperability Demonstration '97 "focused on technologies that enhance real-time collaborative planning in a multinational task force of the type used in Bosnia and in Operation Desert Storm. The JWID '97 network, called the Coalition Wide Area Network (CWAN), is the first military network that allows allied nations to participate as full and equal partners." 15 The demonstration in effect was a trade fair for private companies to demonstrate their goods; defense ministries got to decide where and how to spend their money wiser, in many cases without incurring the cost of prototypes. It is a good example of doing business better with less. Technologies demonstrated included: 16 Soldiers using laptop computers to drag crosshairs over maps to call in air strikes

Soldiers carrying beepers and mobile phones rather than guns.

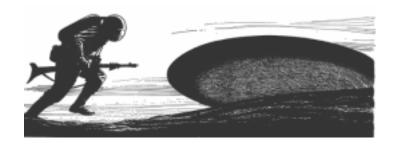
Generals tracking movements of every unit, counting the precise number of shells fired around the globe, and inspecting real-time damage inflicted on an enemy, all with multicolored graphics. 17

Every account of this exercise emphasized the ability of systems to process data and provide information feedback via the power invested in their microprocessors. The ability to affect or defend the data-processing capability of the human operators of these systems was never mentioned during the exercise; it has received only slight attention during countless exercises over the past several years. The time has come to ask why we appear to be ignoring the operators of our systems. Clearly the information operator, exposed before a vast array of potentially immobilizing weapons, is the weak spot in any nation's military assets. There are few international agreements protecting the individual soldier, and these rely on the good will of the combatants. Some nations, and

terrorists of every stripe, don t care about such agreements.

This article has used the term data-processing to demonstrate its importance to ascertaining what so-called information warfare and information operations are all about. Data-processing is the action this nation and others need to protect. Information is nothing more than the output of this activity. As a result, the emphasis on information-related warfare terminology ("information dominance," "information carousel") that has proliferated for a decade does not seem to fit the situation before us. In some cases the battle to affect or protect data-processing elements pits one mechanical system against another. In other cases, mechanical systems may be confronted by the human organism, or vice versa, since humans can usually shut down any mechanical system with the flip of a switch. In reality, the game is about protecting or affecting signals, waves, and impulses that can influence the data-processing elements of systems, computers, or people. We are potentially the biggest victims of information warfare, because we have neglected to protect ourselves.

Our obsession with a "system of systems," "information dominance," and other such terminology is most likely a leading cause of our neglect of the human factor in our theories of information warfare. It is time to change our terminology and our conceptual paradigm. Our terminology is confusing us and sending us in directions that deal primarily with the hardware, software, and communications components of the data-processing spectrum. We need to spend more time researching how to protect the humans in our data management structures. Nothing in those structures can be sustained if our operators have been debilitated by potential adversaries or terrorists who- right now-may be designing the means to disrupt the human component of our carefully constructed notion of a system of systems.



MIND CONTROL

Years of technology developed with Project Rainbow and the Phoenix Project may have been used during the Gulf War. Most Americans had the opportunity to watch the live briefings of the Persian Gulf war on CNN. Five briefings, to the astute listener, nearly always disclose revealing information that later will be edited out.

A CNN reporter said that he had just returned from Kuwait where he had travelled with an American patrol. They had observed a patrol of about thirty Iraqis some distance away and the Americans were wondering how they would get them to surrender.

A U.S. helicopter suddenly appeared and flew over the Iraqi patrol, and by the time the helicopter had reached the next sand dune, they had surrendered.

This is very unusual because these were the same Iraqis who waged unrelenting Holy War against Iran for eight years.

Later, as the land battle was winding down, a BBC reporter asked about American plans to get the Iraqi soldiers out of the deep, well-fortified bunkers built by the Germans. General Neil started to say, "We bring in the psychological..."

He then broke his sentence with a cough, apparently having caught himself saying something he shouldn't reveal. When he stopped coughing, he said the Army flew in with PA helicopters and "talked them out."

It seems apparent that the General had made a mistake and had to cover up something like: "psychological warfare broadcasting helicopters" with "PA helicopters."

Even after massive pin-point air bombardment, the Iraqis were still alive and well protected in the hunkers. They had electricity, entertainment and enough food and water to last for about six months. They also had equipment to tunnel out if prime entrances were blocked.

That these fanatic soldiers would have surrendered under the slight threat of PA system helicopters is absurd and, knowing of the mind control experiments being conducted by the U.S. military and intelligence agencies, it seems reasonable to assume that mind control or subliminal transmissions were used to coax the Iraqis to surrender en masse, so many, in fact, that coalition forces were hard-pressed to house, feed and guard them!

A HISTORY LESSON ABOUT AMERICA'S MIND CONTROL PROJECTS

While the Phoenix Project was investigating weather and the use of radiosondes (which has evolved into HAARP), Project Rainbow resurfaced in 1947 or 1948. Project Rainbow (The Philadelphia Experiment) was funded to continue research into the phe-

nomena encountered on the USS Eldridge. This project was concerned with the electromagnetic technology.

Dr. John von Neumann and his research team, loaned to the Manhattan Project during the Second War, were called back and put to work on a new agenda. It was similar to Rainbow but had a different goal. They were to find out how to protect humans within an electromagnetic field so vessels and crews could be transported through space and time without harm to either or any.

By the early 1950's, Project Rainbow and the radiosonde weather project were included under the same funding and "Phoenix Project" was used as a cover title to refer to all of these "black" activities.

Dr. von Neumann, a mathematician and theoretical physicist who came from Germany, was placed in charge of Phoenix. He was noted for his advanced concepts of space and time. He originated and built the first vacuum tube computer at Princeton University, where he served as the head of the Institute for Advanced Study. He had the ability to apply advanced theories to technology and, because of these qualifications, he could easily communicate with Einstein and acted as liaison between him and engineers serving on the project.

Von Neumann quickly learned that he was going to have to study metaphysics; to understand the metaphysical side of man.

The Rainbow experiment had disassembled the physical and biological structure of human beings. Crew members had melded with bulkheads and changed beyond recognition. Those who had survived were quite mad or died later from madness and some strange internal burning.

Project engineers and scientists spent nearly ten years working out why human beings had troubles with electromagnetic fields that lofted them through different times and spaces. It now appears they discovered that humans are bom with what is known as a "time reference" point. At conception, an energy being (human) is attached to a time line and must begin life manifest as flesh from that point. To understand this, it is necessary to view the "energy being" or soul as completely different from the physical body.

Our references as both a physical and metaphysical being appears to have origin in the time reference residing within the electromagnetic background of Earth. This time reference is the basic orientation point to the way the universe operates. Time, in the normal context, appears always to flow in one direction-forward-at least to our limited senses.

But the Rainbow technology apparently creates an alternate reality having its existence entirely within the quantum field, literally transferring material objects out of our "normal" time and space. This accounts for the light-invisibility of the USS Eldridge and her crew.

The alternate reality created by the shift has no time references because it is not part of the normal forward flow of time. For the person who was experiencing the phenomenon uninstructed, it would be like having an intense and enduring nightmare wherein nothing makes any sense. So Phoenix engineers were faced with solving the problem of letting human test subjects get into and out of the quantum field without harm by some-

how connecting them to the time reference they could recognize as the planet Earth. This meant that when they were in the alternate reality, they had to be equipped mentally with something that would give them a "real time" reference.

Engineers solved this by feeding in all the required natural background information of the Earth to convince test subjects of a continuous stream real earth time reference so they would not experience trans-dimensional disorders. Test subjects would believe they were still in Earth "real-time."

Dr. von Neumann was the ideal Director for the Phoenix Projects. He knew computers would have to be used if they were going to calculate the time references of specific people and replicate those references while they were in the quantum field, otherwise the test subjects would be experiencing essentially "no reality" or a continuous nightmare reality at best.

The computer had to be programmed to generate an electromagnetic background with which the test subjects could synchronize. If not done, the soul and the physical body time and space reference points would be out of sync, resulting in dissolution and insanity or inability to return to Earth real time.

Because they were dealing with two separate and distinct entities-the spiritual human and the physical human- the time reference would be required to lock in the spirit and the electromagnetic background would be required to lock in the body. The technology, begun in 1948, was apparently fully developed by 1967, during the height of the Vietnam conflict.

When the project's first phase was complete, a report was submitted to the Congressional committee from which funds had been appropriated. Congressional members were told that the consciousness of man could definitely be affected by electromagnetism and, additionally, that it would be possible to develop electronic hardware and software that could literally change the way a person thinks about anything and everything.

The committee, fearing they would be first on the list of new test subjects, refused to refinance and Project Phoenix was disbanded in 1969.

But the scientists and engineers at Brookhaven had spent too much time, effort and money on Phoenix to just scrap it and walk away. Their empire was in place, the technology was secure, and the engineers were looking for a mission. What they needed was funding from a secret agency to continue with the mind control experiments. The military seemed the most logical source.

When told a device had been developed that would alter the way people-and particularly soldiers- would think and act, military pundits were beside themselves with joy. Such a device could not only change the outcome of a battle already begun, it might be used to convince entire populations that war is not only unnecessary, but completely impossible. Or that total war was the only solution to a political crisis.

Phoenix had found its mission.

SPINAL TAP

THE INTELLIGENCE AGENCIES DISCOVER MIND CONTROL

Exploration into telepathy, teleportation, transportation, levitation and tentative excursions backward and forward in time has continued almost without cease from 1943

until the present time. The results of the experiments aboard the USS Eldridge, disastrous as they might have been at the time, provided fuel and data for a series of programs and black projects that now consumes a great portion of America's defense budgets.

Scientists and engineers learned how to alter and direct weather, how to create storms or to vanquish natural storms by tapping into the planet's energy and turning it on or off at will. This series, under the title of Proj ect Phoenix, would later absorb Project Rainbow and others, and the entire curriculum would be known as Phoenix.

One facet of the Phoenix Project was intense research into various areas of paranormal activity, particularly telepathy. The military was well aware that the Soviets were involved in paranormal research, and they knew that if sensitive espers could be found who possessed skills or powers strong enough to nullify Soviet espers or even overpower them, America might have an incredible superweapon with whom they could defeat any foe, military or civilian.

When Congress refused to refinance Phoenix and disbanded the group, they had no idea some zealous scientists would seek support elsewhere. When scientists approached the military and told them what they had accomplished and what could be developed from the research, facilities were eagerly prepared, equipment purchased and millions of dollars began to appear from more than one unknown source. By 1970 the Brookhaven group as well as several elite universities worldwide were deeply involved in paranormal research. Some of these splinter projects involved use of drugs and hallucinogens; others not. Some experiments were conducted using electromagnetic fields. A few purists tapped only the mind-power of their test subjects (whom they considered "expendables").

Investigation quickly revealed that telepathic waves, while not radio waves, behaved similar to radio waves and could, therefore, be controlled, modulated and directed with the use of proper equipment. Scientists were elated. They had discovered (or rediscovered) electromagnetic functions unlike anything ever reported in scientific journals and textbooks. They were on the verge of wholly new discoveries in human mind power.

Because the projects were funded by and controlled by the military and federal intelligence agencies, the data gathered was delivered to them and filed away in war rooms and at secret military bases. The general public, by and large, was wholly unaware of these insidious mind-probing activities.

Out of early research came the revelation that certain radio frequencies in the 410-420 MHz range could effectively block human thought patterns, leaving test subjects unable to perform their tasks. Unknown to the researchers and test subjects at the time, the military had established a secret base on the east coast and was using a jamming device in the form of a modified radar antenna that, for 14 years, from 1970 until about 1984, beamed thought altering electromagnetic frequencies toward thousands of Americans in dozens of New England communities.

These thought altering waves would cause crowds to gather and then suddenly disperse in bewilderment; cause an increase in crime, including murder, in areas receiving the frequencies, and stimulated increased delinquency and rebellion among teenagers. When the signals were turned off, these communities would return to normal. The

body snatchers had arrived!

When the base was suddenly abandoned in 1983 or 1984, the former residents left behind nearly all their equipment, papers and military orders. Military transfer orders discovered by other researchers were complete and accurate in every detail, except that some had large words scrawled across them: GONE!

This odd defacing of official government orders could not be explained until further investigation revealed what intelligence agencies had paid for at the secret base. They apparently had been sending their test subjects, all males, some military, some civilians, back and forth through time! Espers found the base surrounded with unusual vibrations and images; remnants of unusual weather patterns, mind control and beings that had been created from the ether out of the thoughts of test subjects. The investigators were certain something remarkable had happened at the facility and set out to discovered what it was. Their focal starting point was the premise that everyone on the base had vanished at nearly the same time, perhaps the same day, and that they had no time to actually shut down the base or decommission it officially. In fact, the base did not officially exist. Except that it was in a state of general disarray when they arrived, investigators found materials, machines, supplies, reports, buildings and support gear in place as if the base might still be operational. But all the people were gone.

Without a trace.

Citizens in nearby cities revealed that while the base was operating, strange things, other than increase in crime and delinquency, had happened. Large groups of animals would suddenly charge into town and crash through windows. It snowed in August. Hurricane force winds suddenly came from nowhere and as quickly subsided. Thunderstorms, lightning and hail would appear and vanish when no meteorological indications of such violent storms had been present. (This is now caused by HAARP).

In 1947, federal agencies in America began an extensive research project into the specific control of weather. This was the original Phoenix project and was developed from data provided earlier by Austrian scientist Dr. Wilhelm Reich. Most of his research data was burned by the U.S. Food and Drug Administration and is no longer available for general reading.

Dr. Reich was best known for his discovery of a force he called "orgone" energy, orgasmic or life energy, the existence of which he proved in his lab. While this discovery in itself, associated with the Newtonian concept of "the ether," was not earth-shaking, he soon ran afoul of the medical authorities when he claimed his control of the life energy, the wave-form nature of the cosmic ether, cured cancer. In 1940s America, such a proclamation was certain to be a decree of professional suicide.

Still, Reich found practical uses for his wave-form energy to control and modify weather by modulating the amount of "orgone" within a storm. Varying amounts of orgone were found to reside in biological organisms as well as in every square inch of cosmic space. By using electromagnetic force fields, Reich was ultimately able to reduce the violence of natural storms, a feat he promptly and foolishly reported to the government.

But the government had been closely following Dr. Reich's experiments and already knew what he could do. They asked for, and received, all his prototype equipment and

research papers and quickly used the information to advance their own weather research (HAARP).

This research combined the radio meteorograph, a balloon lofted weather monitor, with Reich's "orgone buster" and produced the devices now known as radiosondes. In the 1950s, radiosondes were lofted by balloon into the atmosphere at the rates of about 200 per day. Despite the government's cover story that the radiosondes were lofted to gather weather data, no receivers for the transmitters aboard have ever been discovered and the government was able, through a chain of disinformation, to preserve the secrecy of the weather altering devices for over forty years.

Even if radiosondes were used to nullify violent storms on the eastern seaboard, the potential exists to use them to actually create violent storms and to direct them toward specific targets, communities and factories or military bases, which research has been reported in the former Soviet Union for about thirty years.

According to investigators who have pursued weather control, the joint RAFB/USAFB Woodbridge-Bentwaters, just north of London, England, was partially destroyed by a man-made storm. Huge tracts of lovely forest on and around the base were literally pulled out by the roots during a sudden, violent, localized storm of great intensity, a disaster which is lamented by citizens from nearby communities to this day.

PHOENIX II

Research into mind control produces some dangerous and unexpected results: TIME-TRIPPING!

Of all the mind-control experiments conducted in the 1970s and 1980s, those of the Phoenix Project produced some of the most bizarre and unexpected results. While they were primarily interested in altering the moods and behavior of test subjects, scientists at Phoenix quickly learned that they could beam specific controlled frequencies to produce specific mood changes and thought patterns.

Once they had learned this, they beamed those frequencies all over the New England area to see how they could alter the thoughts of local citizens. Those tests produced the results already discussed.

Test subjects were bombarded with many different pulse rates and widths as scientists tried to determine which pulses made the person cry, laugh, sleep, violent, etc. They discovered that when the equipment was operating, the mood of everyone at the facility would change.

From this they concluded that the person did not have to be in the direct path of the beamed frequencies to be affected by the mind control pulses. Their newly found weapon of RF power gave them a virtual doorway to the human mind! Next on the agenda was to discover what was inside and how they could alter it permanently.

Unfortunately, several people died of massive brain damage during the early tests when exposed to long periods of intense pulses of microwave energy. After this problem was solved, the scientists began compiling a data base of pulses and frequencies that produced the results they were looking for and, by 1972, had developed a non-burning, non-lethal technology and began using it almost continually on military personnel and nearby communities.

A natural outcome of these experiments was changing the frequencies to see which produced the best results. From these rapid and random frequency change tests there emerged the first useful ideas and mechanics of time-tripping which would be used later to purposefully send test subjects out of this time/space continuum.

By about 1975, shortly after cessation of hostilities in Vietnam, the Phoenix Project was in full swing with computers, a comprehensive data base covering a broad range of cause and effect, and all the new, powerful transmitters they required to begin beaming their subliminal transmissions over a large area of the American Northeast.

This pulse, when it can be heard above local noise, sounds like a diesel engine running at idle about a mile away and is just at the low end of human hearing. In some areas, a pulse attributed to Soviet experiments is at a very low frequency and sounds like a "woodpecker" at the 5Hz to 8Hz range on shortwave radios. This low pulse has been detected in the Seattle, Washington area and, most recently, in the New England area.

New technology almost always produces unimagined side-effects and Phoenix was no exception. When directed at automobiles, certain pulses could cause engines to stop running and electrical instruments to malfunction. Even animals could be agitated to do strange things. So the scientists had not only a machine that could disable automobiles and machines of war, they had, by the early 1980s, built and programmed a device that would allow them access to the human mind and complete thought control over every citizen of the world. They could turn us on and off like lights, but further research was required to determine which switches needed to be on and in what order to produce the desired effect on a mass scale.

Help was already available and funds were pouring in from private and secret sources. Phoenix had a wealth of supporters, all of whom expected to reap great financial rewards from the new mind-control technology. Some contributors would gain from the manufacture and sale of the hardware and software; some would gain from sale of machines to the military; others would gain by programming consumers to purchase their advertised products and services. Apparently no one stopped to think of those who were going to lose: the people-those into whose minds the programs would be fed.

But the most important discovery was just around the comer. While they were refining the mind-reading/thought control research, the scientists would stumble onto timetripping.

Facilities were expanded, equipment upgraded, new Cray computers fed with synthetic human blood were installed to decode the messages returning from the brains of test subjects and translators were placed into the loop to convert the electrical signals into actual pictures which could be displayed on television monitors.

The engineers, funded by some of the largest communications companies in the world, were able from that time to listen, read and watch the thoughts of their test subjects! They could hear and see what was going on inside their minds. They could join in conversations and record running dialogues. They could varypulses to change the test subject's mood and actually see what the effect produced.

After refinements, the translator was changed into a transmitter; that is, the thoughts of the subject, instead of being merely recorded into a data base, were going to be trans-

mitted to other test subjects who were conducting timetripping experiments to give them a "real time" reference to present time Earth. This reference was found to be necessary so time-trippers would not become disoriented and lost in the quantum field which might produce images vastly different from those the test subjects recently left.

But the "dreamers" or "scanners" could not always lock onto images and hold them for long periods of time and several time-trippers were lost before the "real time" images were converted to computer images that could be locked on for indefinite periods.

It was at this point and with the aid of the Cray and IBM computers and the new "virtual reality" imaging technology that time-tripping became possible without the dangers inherent in the earlier systems which used human scanners who were unable to generate continuous images to those travelling through the quantum field.

Theoretically, time moves in one direction only: forward. There are, however, very subtle shifts in time that most people cannot detect and of which only very astute and sensitive people are aware. One of these subtle shifts is the phenomena of deja vu or "second view." Another is precognition or viewing events in another time before they happen in this time.

I experience these episodes so often that I don't even consider them unusual anymore. They are, as far as I can determine, good evidence that some people have existed in more than one time in the same lifetime and that the friends we gather here are gathered there as well. I suspect this construct would be a parallel universe since things there are as familiar as they are here, however, I am not certain in which of the realities the events actually occur first. Once the time shifts and scan lock problems had been solved with computers, the scientists could conjure up a "pseudo-time" that would tie the time travellers to an Earth reality. This would keep them from getting lost and allow them to find their way back through the quantum field vortex being generated at the facility.

But, because the computers could now generate images that appeared real and solid, the scientists realized they could project or broadcast them and cause people outside the facility to believe they were actually seeing creatures and machines interacting with them. These images were particularly apparent to people who had more than normal sensory perception and, because many of those people report what they think they see, the scientists have been able to compile a small list of potential receptors (espers) who generally incorrectly translate the images and pass them on to nonsensitive people.

This mind control through intermediaries (the espers) has been actively conducted since about 1975 or 1976 and accounts for almost all reports of alien abduction other than those incidents attributed to actual abduction by military or federal intelligence agencies for medical or psychological research.

The early tests, under the cover title of "The Seeing Eye" were conducted to determine how easily espers linked with computer-generated virtual images could influence the general population. The scanner or "Scannate" projects were bom of this new technology and were employed by several different intelligence agencies during the cold war to find submarines, troop staging areas and underground facilities of the enemy. Some of them continue even now at secret bases in American western states.

The only purpose of the new technology being directed at American citizens is to load thoughts into their minds to make them do things they would not ordinarily do, including murder, suicide, madness, or purchasing items they do not want and cannot use.

By 1984, as predicted by George Orwell, Big Brother was inside your head and you didn't even know it.

SPACE ENOUGH AND TIME

THE FIRST TEST SUBJECTS GO THROUGH THE QUANTUM FIELD VORTEX.

After the electromagnetic fields and computer-generated images were refined and perfected, the Phoenix Project scientists began conducting a series of comprehensive tests to determine how effective their subliminal transmission were on the general population.

By 1980 they were transmitting mental images of hairy anthropoid creatures, flying saucers and grey aliens across a large area of North America. All the while they compiled vast data bases and continuously altered frequencies and programs.

Other departments were creating storms and hurricanes and causing floods and blizzards as they perfected their weather machines to be used (they claimed) as weapons of war. We wonder, since Americans became the test subjects, against whom they intended to wage this unholy war? Most certainly from 1980 until the present time, this war has been waged against Americans.

The first hint of something new and exciting came early in 1980 when someone observed that an artificial event occurred before it was transmitted, and others were observed hours or days after they were broadcast. These astounding observations led the scientists and engineers to conclude that the broadcasts were getting lost in time and were being shifted or re-broadcast sooner or later than they should have been.

Further investigation revealed that time shifting was, indeed, occurring. By reconstructing the events and tracing the cause of the shift, they were ultimately able to isolate and control the moment and duration of the shift. They had, by accident, discovered how to manipulate or "bend" time. Because their present equipment was barely adequate to fulfill the requirements of the time shifting, they requested and obtained new and more powerful electronic devices, most of which were installed and operational by 1981. By surrounding their test subjects with powerful electromagnetic fields, they were able to create the effect produced aboard the USS Eldridge but with a great deal more control. They had found the portal into the quantum field and began tentatively to explore it, discovering in rapid succession, null time in which all things material and ethereal exists at one and the same moment in all planes as "being" before the creation of the manifest cosmos; negative time (past); present time; positive time (future) and proof of parallel universes also having their own past, present and future times! It was into this vast unknown quantum field the scientists intended to project their test subjects.

Immediately there were problems. People vanished and were never retrieved from the vortex. They appeared to have fallen into the rabbit hole and not found their way out again. It was from these calamities that the computer-generated links were devised. These "real time" links would serve as a lifeline for the time trippers, allowing them to find the

portals so they could return to present earth time and space. It established a "zero time" or beginning and ending reference for the travellers.

During the early phase of this refinement, and because they worried about losing their trained psychics, it became routine to take homeless people from the alleys and project them into the vortex. If they were lost no one would even miss them. If they returned, they were forced to relate their adventures and then they were projected into the vortex again for additional tests. When they outlived their usefulness or if the scientists feared they might remember what happened and tell someone else, they were projected in and the computer links were shut down. Hundreds of people may have been lost in this manner.

Once the zero time and the image links were perfected and programmed into the computers, the human psychics in the loop were deemed unnecessary and they were taken out, primarily because they were unable to consistently lock in the real time images required to maintain the link between this time and "other" time. The project was now totally controlled by vast electromagnetic generators and computers.

Most of the base personnel-those who had not succumbed to the project-had been transferred to other assignments. New crews arrived to guard and maintain the base.

Civilian cadres were down-sized and many of the psychics were cut loose. Many of them simply disappeared. Between 1981 and 1983 a large number of successful, if mostly tentative, excursions had been made forward and backward through time in parallel and alternate universes as well as projections back and forth in earth time. During the trips back into earth time, a number of significant historic political events were altered. They explored the vortex in Earth's past and future, sampling air and water and observing the evolution of society and the loss of natural resources, altering those events that would have caused natural or manmade disasters in the future. These alterations have bent the earth's time line and forced it out of its original direction and chronology. Those of us living since 1983 are not the people we would have become had not the time-trippers altered our time/space.

Because the transmitter could be tuned to any point or time, travellers were often projected into parallel universes and into past, present and future time. The vortex was described by test subjects as being a twisted tunnel, brightly lit and having branches and side tunnels. They described their trips, their missions and their return trips.

It is interesting to note that, while hours or even months might pass while they were performing tasks in the alternate or parallel time, the trippers almost always returned to the exact moment they left Earth's real time. To the casual observer, they would have appeared not to have gone anywhere at all!

"There was not," claimed one scientist, "more than a slight bending of light rays to indicate the test jumpers had gone into the vortex. They reappeared, after having performed tasks for weeks, in the next second."

The project, sophisticated as it was by 1983, was not without danger. More than one tripper was abandoned in the vortex when power fluctuated or was lost. Still, both volunteers and conscripts, all males between the ages of 16 and 24 years, and in the total number of perhaps ten thousand, were being lofted into the vortex on a daily basis,

many of them equipped with transmitting devises that could send messages and images back to the test facility, and many others with mining and survival equipment. A large number of these trippers did not return to present day earth and it is to be assumed that theirs was a one-way mission through time. They were not expected to return and, indeed, must have agreed not to.

From this revelation, many are led to conclude that the trippers were sent through the vortex to terraform a distant planet or, perhaps, to colonize a near celestial body such as the moon or Mars.

Several sources have indicated that manned landings were made on Mars as early as 1962 and there is some evidence to suggest that the first large group of colonists were lofted to the Martian and lunar surfaces by the Brookhaven group using their time/space bending technology. Something is certainly going on up there, particularly at the Martian South Pole where a complex resembling a water extraction and treatment plant has been photographed in great detail!

To understand time, one must remember that "time" as a thing does not actually exist. "Time" is the orderly progression of events occurring only in the mind of the observer and only within the limits of the particular universe in which they are manifest. These same (or similar) events may also occur at the same moment in a parallel universe. If the observer was projected suddenly into the parallel universe, he might not even be aware that a shift had occurred, except that he might experience some vertigo or an episode of deja vu. Generally these episodes are nullified with a shake of the head or a shrug of the shoulders.

The observer appears to be in his own real time and continues with his life as if he were. He is totally unaware that a time shift occurred or that he was momentarily in the vortex. These sudden and unexplained shifts may have no direct impact on one's future. On the other hand, they may have profound effects on all of humankind, for the act of changing the time line of a single person is tantamount to changing everyone's time line. The alternate future, once established, becomes fixed until or unless someone goes into the vortex to tamper with it again.

Because the time line has already been altered, first accidentally with the Philadelphia Experiment and then purposefully during the Phoenix Project, we find ourselves in a time lock in which everything appears to be progressing normally but is, in fact, progressing through altered time.

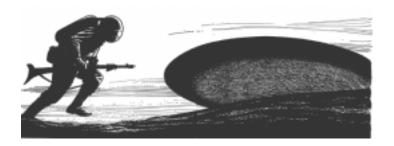
Events are getting away from us. Our control over normal chores diminishes. Events occur for which there are no logical answers. The weather has gone haywire. People have gone mad and the prisons are full to overflowing. We've jumped sideways and are having trouble finding our way back to 1943.

Those who time-travelled to the future came back predicting the year 2021 as the beginning of the end time. Those who went farther found only global desolation caused by the passing of a huge red dwarf sun they named "Nemesis." Have they described the return of Planet X/Marduk/ Nibiru? Is the "end time" and the "second coming" a referrence to the return of a planet (the god Marduk) or "sun" (the red dwarf) rather than the God of the Bible or "son" of god (the Messiah)?

[Editor's Note: The following is an abridged translation of some articles that have appeared in Brazil regarding the alleged capture of an extraterrestrial in the city of Varginha, Brazil.

I have edited the text to make it more readable, but some of the proper names and city names are undoubtedly misspelled. Diacritical marks, so important in Portuguese, do not translate in American word processing software, so I've had guess at some of the intended spellings (and I don't read Portuguese!)

The ellipses, capitalizations, etc., are original. Further updates on this complicated affair are pending.



VARGINHA ET CASE: THE WHOLE STORY UPDATED BY THE UFOLOGISTS

This article was originally published in the Brazilian Revista UFO (UFO Magazine), Special Issue #13, July 1996, edited by CBPDV (Centro Brasileiro para Pesquisa de Discos Voadores — Brazilian Center for Flying Saucer Research), Editor A.J. Gevaerd.

This is a short version, kindly summarized and translated from Portuguese by P.H. Andrade, with the help of his brother, Carlos. This article is updated until July 1996.

The Brazilian state of Paraiba, just north of the port city of Recife on the easternmost "bulge" of South America, was the scene of numerous UFO sightings during the week of April 4-11.

Witnesses have reported seeing disc-shaped objects in broad daylight, some with multicolored lights on their undersides, hovering and maneuvering silently overhead.

The Brazilian newspaper O Norte reports that a car was found abandoned in Caiac, a small town in the northwest corner of Paraiba, with "strange marks on the roof," and no sign of the driver. The Federal police are investigating the incident.

Much of the UFO activity has been concentrated in the Pirpirtuba district. On April 5, a disc hovered over an empty lot in Guarabira, where it was observed by eight people.

Two days later, Mrs. Maria Jose and her son were traveling along the main highway between Joao Pessoa, capital of Paraiba, and Natal when they saw a peculiar object hovering near a local cemetery.

As they watched, the UFO sped directly at them, passing over the roof of their car. Mrs. Jose was so terrified by this encounter, she had to be taken to the hospital in Campina Grande.

In the village of Gota de Agua, a teenage boy spotted a silver disc flying down the valley, heading west toward Planalto de Barbareme. In the same vicinity a woman reported seeing a similar object on the ground, with strange "being" standing beside it. Further description of the "being" is lacking.

This area of Brazil is no stranger to UFO sightings and abductions. Back in 1971, two men at Bananeiras were reportedly taken aboard a UFO by some "small aliens" and held captive for five hours.

The Saturday that the ET capture took place, January 20th 1996, I wasn't in Varginha. The day after, January 21st, I arrived at about 10: 30 a.m. and received a call from a store-keeper who owns a shop in the center of the town, Mr. Milton.

He asked if I had knowledge of what happened the day before and told me that ...

some girls had seen a weird animal, something like a little monster. (...)

That same night, as I realized that the rumour was already spread throughout the city, I called Milton again to get further details. (...) An employee of his shop would have more information. (...) She knew the people that had seen the strange being. (...) The girls live at Rua Tapajos [Tapajos Street], Varginha, to where I went. (...) I asked a near storekeeper if she knew the girls, she said so, adding that "she had also observed the movement around that area regarding the case."

This lady said she was friend of Luisa (the girls' mother) and that she was told the girls arrived at home scared, that afternoon. They were screaming, crying and shaking. They had seen something very ugly. (...)

Meanwhile, the rumours continue to spread through the city. Some people said the creature had been captured and taken to the "Hospital Regional" [Regional Hospital], that it had a big belly, seemed to be pregnant, and made a noise, like if it was crying. (...)

FIRST WEEK OF INVESTIGATIONS

I began to investigate and was helped by a friend (...), Sergio, director of TV Princesa, a local TV station. We've got access to a boy that said he was present at the capture. But his words didn't make any sense, he was too childish, and very confused. (...)

We also have got access to a woman, who ran away the moment we approached her. Her husband tried to convince her to give us some info, but she refused. (...) Finally, we found the girls and took their testimony. They were two sisters whose mother, Mrs.Luisa, received me a little suspicious. I identified myself as an UFO researcher and lawyer, and explained my interest in the situation. (...)

I was extremely impressed with what they told me, specially the older girl, Liliane, 16. When she was telling me what happened, she burst into tears. (...) Then, I asked them to introduce me to the third witness: her friend, Katia, 22, that also cried when we met. I asked them to take me to the place where all had happened. (...)

They told that when they were in the middle of that pathway, they saw a strange being squatted in the ground (...). To Valquria, the younger, it appeared to be [the color of] a giant ox heart. (...) They realized that it was something out-of-this-world, when they returned to the street and went away, running. (...)

After hearing all the story from her daughters, Lusa returned to the place to see if she could find any evidence, but she didn't. (...) Lusa noticed a strange smell, very strong and impossible to be compared to anything else.

The following days, I kept on talking to them, and asked them to repeat several times what they had seen.

AN EXTRATERRESTRIAL AT THE HOSPITAL

This procedure is common in researches, because it helps to find contradictions in the testimonies. (...) Meanwhile, the rumours continued to spread, increase, and gained consistency in Varginha.

The whole city started to comment on the story. (...) In Varginha, there are three hospitals, however the rumours converged only to the Regional Hospital. It wasn't possible to be sure of anything, especially about which hospital would be involved with the fact. Everything was obscure, until I managed to talk to a nurse at Regional Hospital

(whose name cannot be revealed, in order to preserve her safety).

She was very reluctant to talk to me until finally, she accepted to be interviewed. She revealed that on Sunday, January 21st, a strange movement occurred at Regional Hospital. involving physicians coming from outside Varginha with military police and Army vehicles.

However, she didn't speak a word about the Fire Department. (...) One of the hospital sections, according to our source, was closed for some hours in order to avoid access by employees, patienrs and visitors.

She also said that, on Monday, January 22nd, she was called, together with other employees, for a meeting at the Director's room.

According to her testimony, the director said that all that movement should be ignored, because "it was just training for the doctors and military personnel". (...)

According to this witness, the meeting culminated with the following statement from the director: "Here in Varginha there are people who like to deal with cool things, I mean, supernatural, strange ... It is probable that these people will look for you, specially that lawyer, Ubirajara. You must deny everything. I do mean deny."

Later, I spoke to a former pupil of mine, who said she had been at the hospital entrance hall that Sunday, by 10: 30 p.m., together with a friend of her. She asked the receptionist if it was true what the rumours said about the "little monster" received at the hospital. The employee confirmed it, saying that the being wasn't there anymore, because it had been removed to another city hospital, the Humanitas.

So, the women went there, too. Now, they were attended by a nurse who told them the following: "You cannot go inside to see that and, even if you could, I wouldn't advise you to...you wouldn't like to see it."

The same time, some parallel witnesses, which live in Humanitas region, said they had seen troops movements at the lateral gate. This was everything I knew then. It was necessary to have stronger evidences.

So I tried the military area, firstly Commander Mauricio, from the Military Police. When I met him, I identified myself and explained the situation. I asked him if he had knowledge of the rumours that the MP was involved in the capture case. His answer was negative.

He then, offered to check it out, and verified that there were no records of such occurrence. Even thus, he asked me to contact him again, because perhaps he would find something. The next day, as it was scheduled, I called Commander Mauricio, but he didn't respond to me.

I MADE ABOUT 50 PHONE CALLS TO THE QUARTER, BUT WASN'T ANSWERED.

So I began to feel that something was wrong. THEY WERE HIDING SOMETHING. A friend of mine managed to talk to a policewoman that was on duty at Saturday, January 20th, receiving the emergency calls, thru the number 190 [Note from translator: similar to 911 in the U.S.].

She revealed there were some calls: "In fact, some people called saying they saw such a little monster, but we thought they were kidding and we didn't give any attention to them."

SEEKING THE FIRE DEPARTMENT

Me and Sergio looked for the local Fire Brigade and we were received by Captain Alvarenga. (...) The moment we identify ourselves, he got the bulletin of occurrences for Jan. 20th, in order to prove there were no requests for the capture of a strange animal, or something.

He simply had a defensive attitude regarding us. During the interview, I excused myself and made a brief pause to drink some water, at the end of the corridor. I saw there two firemen talking, speaking loudly and fluently, as if they were making fun of me: "Yeah, it could be a giant frog," one said. "No, it should be a demon, ha, ha, ha," said the other. (...)

We followed to the Forest Police, where we were received in a very different manner. Their captain was friendly and said he likes Ufology. (...) He stated that the Forest Police weren't called at that occasion, but put himself on the line to share any further information.

We came back again to the nurse. (...) She spoke with her colleagues in the hospital and, although they hadn't seen anything, they were unanimous in stating that there were a strange movement that day. (...)

Meanwhile, the information that a strange being appeared in Varginha had already reached the local media. All the local press, newspapers, radio and TV stations had already covered the case, although I had my doubts about spreading the case in the [Brazilian] national media. (.

..) Nevertheless, due to the difficulties of the investigation and the big cover-up, there was no other choice than calling the national media. Only this way we could pressure the authorities.

The same occasion, I was interviewed live at the request of Globo TV Network (local branch). Everything was going normal (...). In the middle of the program, however, something we weren't expecting happened.

The reporter took two faxes from over the table and said "We just received right now a communication from the Fire Department and another one from the Regional Hospital, denying everything. Both institutions say they were not called and had no involvement with it."

Part of the Fire Brigade fax did the following statement: "This corporation communicates to the people of Varginha that it was not called to capture an extraterrestrial."

This was said in the middle of the news. I said, firstly, that I never affirmed the captured being was alien. I've said only that it was an unknown and strange being. I'm very careful with the words. (...) I made use of that chance and said that the UFO cover-up is such a thing that exists all over the world and started a longtime ago. After this interview, I decided to call the national media. (...)

I called the ufologist Irene Granchi, in Rio de Janeiro, who contacted the journalism production of Globo TV Network [Note from translator: Globo TV is the major Brazilian TV network]. Since then, the case blew wide open in the [Brazilian] media. (...)

At the end of the second week of investigations, I called Revista UFO [UFO Magazine] and let them know the facts. In the third week, a researcher from Belo Horizonte

(up to then member of CICOANI - Centro de Investigao Civil sobre Objetos Aereos Neo Identificados-Unidentified Aerial Objects Civilian Investigation Center) made contact with me.

It was Vitorio Pacaccini. Since then we established a partnership in the researches, that has lasted over four months. (...)

THE BRAZILIAN UFO

Before the Varginha Case appears in the media, I didn't know Ubirajara yet. (...) At first, I was investigating the case for CICOANI and had already contacted some people I knew from Tres Corafes, MG [State of Minas Gerais] in order to gather information about the case, specially at ESA (Escola de Sargentos das Armas - Army Sergeants School).

This happened in the beginning of February. On Wednesday, in the carnival week, I received a call from a source who said that it was "time for the jaguar to drink the water."

In our language, it means that some important witness was about to talk. The name of the witness, for now and for a while, cannot be revealed. I don't want to put anybody in jail or harm people's lives. (...) So, on this Wednesday, I went to a friend's home where he introduced me to the first witness. (...)

After some minutes of conversation, this military man began to speak about the subject.

FIRE FIGHTERS ARE REALLY INVOLVED

Everyone in Brazil knows that when there is a problem with animals, like a wild beast escaping from the Zoo, for instance, the Fire Department is called. (...) However, the first phone number that comes to one's mind in a danger situation is 190 (the police number). So, we've concluded that firstly the police were called and then, they forwarded it to the Fire Brigade.

According to our source, in the morning of January 20th, the Fire Dept. phone was ringing over and over. It was people informing them of the appearance of a weird animal in a certain region in Varginha, and requesting some them to catch it.

It is important to emphasize that these phone calls started very early that morning, between 7 and 8 a.m., consequently before 3 p.m., when the girls sighted the creature. In the occasion, the man in charge was Major Maciel, who would have sent four men to check the situation.

These firemen, at the moment they arrived there, called the major thru the radio and asked him to go there too: "Better come here, sir. Even the Army is already here."

So, the Major followed to the place, approximately at 10:30 a.m. . When they reached there, the capture had already been done.

There were some people, including children, who threw stones towards the vreature.

The four firemen (...) caught the being with a net (similar to that used to catch dogs). They were using common gloves, but were afraid of radiation. The creature didn't show any reaction, staying totally apathetic and letting himself to be caught. It made a noise similar to the bees buzzing. It was put in a canvas-covered box and transported by an Army truck.

This witness is extremely trustworthy, knows eveyone in the Fire Department and

has access to classified information.

However, he is very afraid of revealing what he knows even to his closest people, due to the dangerous situation. According to the description, the creature had sticky skin (seeming to have put an oil on the body), red eyes, big head with protuberances, long and thin arms, short and thin legs, big feet and a big salience at the abdomen. It had no kind of clothing, as well as no apparent genitals.

In the ESA truck that conducted the being, there were two sergeants and one major, all of them with a 'Gadacho' accent [Note from Translator: gadacho is somebody who was born or lives in the southern state of Rio Grande do Sul].

All these information were given in a 45-minute interview. The witness was emphatic, saying that the Fire Department command had knowledge of the whole operation, and that Captain Alvarenga simply lied when he said he didn't receive any notification.

All of this reveals that somebody is lying in this case and it seems that it's not the witnesses, because they wouldn't gain anything with it. (...)

I MADE CONTACT WITH OTHER MILITARY WITNESSES FROM TRES CORADES IN SECRET MEETINGS. ONE OF THEM, BY THE WAY, WENT TO MY HOUSE AT 3 A.M. TOGETHER WITH HIS WIFE. HE EXPLAINED TO ME HOW THE ARMY'S SECRET SERVICE WORKS.

It has a very-well-implanted unit in the city, with people taking turns over and over, in order not to be recognized. These blend with the civilians, often use mustaches, long hair, drive old cars and behave as civilians.

This one that came to my house said the capture had been extremely favorable to the Army, because it happened in a weekend (when ESA stays practically empty, only with guards) and also due to the fact that the secret service members could enter or leave at any time, without giving explanation to anybody.

Inside ESA, there is a shed where the S-2 works, surrounded by enormous security. Even officers have no access to that place. (...) We've had a good support from the media, (...) which is trying to show the facts as they are. If the media, or I should better say, part of it, like Luiz Petry (director of "FANTASTICO" [Fantastic - Brazilian popular TV show, aired by Globo Network], didn't run for it, seeking information, everything would have finished with no explanation. (...)

UFOs FLYING OVER SOUTHERN MINAS GERAIS

While the Varginha case blew wide open in national press, it began a big UFO wave over the region. Cities such as Varginha, Alfenas, Boa Esperanza, Tres Corades, Bandeira do Sul, Sao Gonzalo do Sapuca, Campanha and many others were taken by unidentified objects sightings.

The population noticed that something serious was happening and several people came to us reporting sightings, contacts or recent news about the capture. At that time, end of February, I met an old friend that I hadn't seen for a long time.

He knew a military man who was involved with the capture. We managed to meet him and heard his report. The more he revealed, the mosr everything became incredible. He revealed the names of the people who were directly involved with the case.

COLONEL OLYMPIO VANDERLEI AND SERGEANT PEDROSA.

The interview with this ryrwitness was made by me and UFOlogist Marco A. Petit, and recorded on video as a guarantee of proof.

In this tape, we ask the witness if there is the possibility of somebody attempting against his life, and he said so. (...) More witnesses are discovered. Later, we managed to contact another military witness.

He was very reluctant in speaking with us, but when he realized the subject was already spreaded, he got courage to tell what he knew.

For his surprise, nobody at ESA knew anything, because there was a disinformation operation inside the Sergeant's School.

Talking with us, he described the fact exactly the same way that the other did before. Only few people inside ESA know details of the operation. (...) Everything there is top secret. The school's military contingent is over 3,000 men and, for sure, about 98 % of them don't know anything.(...)

There are also other military witnesses who confirm the inforamtion we have. We know two people who have been directly involved with the dapture and transport of the being.

Obviously, they cannot be identified, because their lives would be in danger. (...)

NAMES OF THE PEOPLE INVOLVED

After we placed together all the information on the case, we obtained the names of military personnel directly involved with the case: Lieutenant-Colonel Olympio Vanderlei, Captain Ramires, Lieutenant Tiberio (from the Army Police) and Sargeant Pedrosa. We also know the names of the three drivers: Corporal Vassalo, Soldier Cirilo and Soldier De Mello.

They met a Lieutenant from S-2, who arrived in a white brown Volkswagen (Fuscatype) and stopped beside the "Paes Mendona" supermarket, in Varginha. This lieutenant sent all of them, by Fusca, to the Humanitas Hospital, where they did some kind of secret operation. (...)

(...) Arriving at the hospital, there was a wooden box tied on two trestles, and one of the S-2 agents was carrying a camcorder.

The other military men received orders to take their jackets off and were forbidden of using voice recorders, cameras or camcorders. At that time, Military Police and Fire Department vehicles have been seen at the hospital's entry yard with six men, as well as two men from the Army's secret service and some physicians.

The dead creature was put inside the box, which was closed by a plastic canvas and placed into the truck. The truck body covering have been strengthened in order to really hide the being.

At that time, especially on January 22nd, the whole city was commenting on the strange ESA truck movements. It was impossible not to notice that.

Everyone commented and the rumours increased. The convoy's route to Tres Corades was easy. Reaching the city, Policemen were already holding up the traffic. It seems that the convoy's drivers didn't know what they were transporting.

One of them, in his testimony, said he thought it was a burnt man, a suicide, or something. He also said the creature had a terrible bad smell. Because there were three trucks involved, we suppose that, maybe, there were three creatures.

But this can't be said for sure. (...) By 4 A. M., the same convoy followed to Campinas where, according to our sources, the creature has beennecropsied.

At this time, there have been a meeting with some officers, when it was emphasized that all this operation was secret, classified (...) and all must be kept in silence. The soldiers arrived at Campinas by morning. (...)

Even an Engesa-type Jeep, war model, was used in the convoy, among other military trucks. We don't know yet exactly to what military unit in Campinas the convoy was destinated. Reaching the destination, the box took another direction, which is still unknown.

(...)We have concluded that they transported the creature to Campinas in order to put it on the hands of a professional from Unicamp [University of Campinas, a well-recognized Brazilian university]. According to our investigation, this professional is one of the most respected legists in Brazil and internationally known.

We have obtained access to this information through a scientist at Unicamp, whose name must remain anonymous. This scientist even said he went to Varginha where he obtained soil samples and vegitation from the area where the being was sighted.

Thus, it became obvious that the creature had been taken to this university. (...) There are no doubts that Unicamp is involved in the case. Our scientist talked to some teachers, close people who often visit his house, and knew that there are orders from the government to never mention a word about this subject.

As they told him, the head of the university was also ordered to keep this operation secret. Reliable sources say that physician Baden Palhares (who is responsible for important necropsies, like the Nazi Joseph Mengele one) performed the first nedropsy on the creature.

Regarding to the number of beings captured, it's still obscure. Analyzing the probabilities, we can say that there are at leadt two beings: the first was captured at 10 a.m. by the military men, and the second was sighted by the girls at about 3 p.m. (...)

We already know how the first creature was captured, at 10:30 a.m., involving the Police, the Army and the Fire-Fighters.

But what about the second? How did it happen? As the witness revealed, it occurred at about 8 P. M. that Saturday and involved the military police secret service. [Note from Translator: also known as "P-2"] and the Fire Department.

This capture was much more discreet than the first, because the military arrived in plain clothes and using civilian cars. The creature was in an area near the woods, where the military surrounded and caught it.

This information came from a well-known lady who lives in the city, a member of the Varginha's "high society", who heard that a police soldier had caught the creature.

This being would have been taken to the nearest local medical ststion where the doctor on duty advised them to take it to the hos.pital

AN EXTRATERRESTRIAL IN TWO VARGINHA HOSPITALS

There are evidences that the captured creature, for some reason, have been taken to the Regional Hospital. But the men in charge of the operation must have concluded that that place was too central and not safe, deciding to take the being to a better place: the Humanitas Hospital, which is more well equipped and is located in a region far from the center of the town.

This hospital lies beside a little peripherical road, which leads directly to the "Ferneo Dias" Highway [Note from Translator: which links Belo Horizonte to Sao Paulo]. It made the transportation very easy and discreet. Are they right?

Our sourde in Campinas said that Brazil is under strong pressure, warning that we may be sitting on an atomic bomb.

According to his testimony, the whole capture and cover-up process goes deeper and deeper, beyond we can imagine. So, we ask: (...) are they right? Will it be true that some kind of battle between alien and military forces had already happened? Shouldn't be the Army the right channel to deal with this matter?

- (...) And shouldn't be this whole operation classified? From our point-of-view, they could share with us the information they have. (...) We'd love to help them, but it seems to be impossible.
- (...)What if an UFO crashed in my yard, who am I supposed to call? Obviously, the first thing I would do was to call the military authorities, because that's their job.

As a matter of fact, we are concerned because we're reaching the conclusion that the Varginha case is only the tip of the iceberg. On the other hand, the right to know must be respected. (...)

AN ALIEN IN VARGINHA?

There isn't in ufology's alien classification a being with such characteristics like that of the one saw in Varginha. That's something important to the world's Ufology. This emphasizes the possibility of a genetically adapted creature, whose aim was to do some operation among us terrestrials. (...)

(...) It is very likely that the Varginha ET was some kind of animal created only to conclude a mission, which is still unknown to us. Or perhaps it would be some kind of probe, patrol, or monitoring of the human race. Ufology's classification is something relative. (...)

The classification has a wide variety, but much of it is due to the different interpretations made by the people who describe and draw the beings. Two reporters here from Varginha were searched by a person who identified himself as the-cousin-of-a-son-of-a-military-man-from-ESA.

This military man's son would have access to a film made at ESA showing the creature (or creatures) and showed it to his cousin who then offered it to SBT [Note from Translator: SBT =3D Sistema Brasileiro de Televiso= Brazilian Television System, the second major TV Network in Brazil] FOR 70,000 Reals [or 68,000 U.S. dollars]. Since then, the price has been reduced.

There had been a negotiation with SBT involving the SBT Board of Directors in Sao Paulo in order to purchase the film. The young boy visited the local SBT station, but they

didn't reach a deal. Some time later it would not be possible to do it because others suspected him and his life was in danger.

This coincided with the fact that in the same week a Varginha citizen with a good reputation in the city came to us and said his 16-year-old daughter and a school friend daughter of a policeman from the M. P., watched a horrible film that her father had brought home. It showed the captured creature. As the girls father realized the situation was dangerous, he vanished with the tape.

We know this tape exists, and for obvious reasons: witnesses had already informed us that in the capture day one of the military men was using a camcorder. (...) We have evidence the film is still in Varginha.

Varginha, a small town in the state of Minas Gerais, Brazil, has become famous overnight because of something other than its excellent coffee. Local people celebrate now the four-month anniversary of the most extraordinary close encounter with extraterrestrials ever to be registered in the country.

At 3:30 p.m., on a sunny and bright Saturday afternoon, January 20th, three girls were coming down a narrow path in the area known as Jardim Andere, 2 kilometers away from the city center, when one of them, Liliane Fatima Silva, 16 years old, looked left and screamed.

She had seen a strange creature, with slippery brownish skin and what looked like three small rounded horns protruding from its head, at about 7 meters from the point they were standing. It was near the back wall of an old garage.

"He was squatting, with his long arms between his legs," the girls say. "The first thing to call my attention were his eyes, huge and red." Terrified, Liliane turned her back while her sister Valquiria, 14 years old and their friend Katia Andrade Xavier, 22 years old, stayed looking at the creature, unable to move.

"It was not an animal and it wasn't certainly human. It was a horrible thing!" says Katia, who works as a maid and has three children.

"He seemed stupefied. He didn't make any noise," says Valquiria. But then, the creature made a small movement and the three girls ran for dear life. Forty minutes later, Liliane and Valquiria's mother, Luiza Helena, 38 years old, arrived at the place to find out what had scared her daughters so much. She found nothing.

The story has been widely publicized because, apparently without knowing about the incident involving the 3 girls, an elderly couple, Oralina Augusta and Eurico Rodrigues, who work as farmhands, insist on having seen a UFO very early in the morning of January 20th.

They were sleeping in their house which is located near the road which goes from Varginha to Tres Coracoes when they woke to the noise made by the cows. They looked out of the window to see the animals totally disoriented and running around the house.

Eurico says: "We looked at the sky and saw a gray object, similar to a submarine, the size of a small bus, flying very slowly over the ground," describes Oralina. "There was something like white smoke coming out of it. There were no lights and it wasn't making any noise."

Local people immediately associated this spaceship with the ET who appeared 14

hours later. The day after, Mr. Ubirajara Franco Rodrigues, a UFOlogist and a lawyer who teaches at one of the four colleges in Varginha, started investigating the incident.

Mr. Rodrigues has been studying UFOs for over 20 years now and he says that only 1% of the so-called UFO sightings are authentic. For him, the Varginha episode is the exception which confirms the rule. "What these women saw was, without any doubt, an alien creature," says Mr. Rodrigues. He has also concluded, after his investigation, that at least 2 EBEs (extraterrestrial biological entities) and not only one were seen in town on January 20th.

Since then, a great number of ufologists have visited Varginha. To be more precise, 66 specialists have been to the city to investigate the event.

"It is certainly the most extraordinary thing we have ever heard about, and we have lots of registers of UFO apparitions," says Mr. Claudeir Covo, an engineer who is the president of the Instituto Nacional de Investigação de Fenomenos Aeroespaciais (INFA).

Mr. John Mack, a professor of Psychiatry at Harvard Medical School is a specialist in research with human beings who have been in close contact with ETs. He traveled all the way from the U.S. to Varginha especially to do a series of interviews with the three women who said they had seen the alien.

The repercussion of the episode reached beyond the specialists in UFOs. The most popular Brazilian TV program covered the subject three times in less than two weeks and the mayor of Varginha is considering the possibility of organizing an international congress.

But before such an event, the ufologists working there intend to finish their investigation which lasts 4 months already and which points at the army as the party responsible for the capturing and hiding of at least 1 of the 2 aliens who are supposed to have been seen in Varginha. In a report signed by ten different organizations, they unveil "a very real, complex operation involving military personnel as well as civilians, which resulted in the capture of unidentified biological creatures.

These creatures, according to these organizations, were kept under medical observation for some time and later on removed from the city." Apart from Mr. Rodrigues, another ufologist, Mr. Vitorio Pacaccini, 31 years old, has been traveling to the area over the past few weeks.

Both specialists swear to have listened to 14 witnesses of the ET episode, among which 4 people from the army. But they refuse to reveal any names or evidence, apart from a photograph of a supposed interview with 1 of the officers or soldiers who would have participated in the operation.

The ufologists insist that an alien would have been captured by 4 firemen at 10:30 a.m., on January 20th near a wood which is located a few meters from the place where the girls would have seen their ET and about 5 hours before Liliane, Valquiria and Katia had the fright of their lives.

According to the ufologists, the alien was immediately placed inside a wooden box, covered with a white cloth, put inside an army truck and taken to the Escola de Sargentos das Armas, in Tres Coracoes, a bigger town about 25 kilometers from Varginha.

The day after, still according to the specialists, another ET would have been seen at

the Hospital Regional, in the city center and this time, yes, it would be the alien seen by the 3 girls.

In an operation involving military personnel from the Escola de Sargentos, officers from the military police and the fire brigade, the ET, said Mr. Rodrigues and Mr. Pacaccini, would have been taken, before dawn, on Monday, January 22nd to the Hospital Humanitas, the best hospital in the area, 1.5 kilometers from the city centre.

At about 6:00 o'clock p.m., on the same day, the ET, already dead would have been taken back to the Escola de Sargentos in one truck which was part of a convoy of three vehicles.

The same convoy would leave the school in Tres Coracoes at 4:00 o'clock a.m., on Tuesday, January 23rd. Destination: Campinas (a much bigger city upstate Sao Paulo) where the "cargo" would have been delivered to another military unit, probably the Army Cadets Prep School.

"All this operation was coordinated by lieutenant-colonel Olimpio Wanderley Santos," says Mr. Rodrigues.

"We have the testimony of an army officer from the Escola de Sargentos in Tres Coracoes who was directly involved in the operation. He describes in detail everything that happened during those days," adds Mr. Pacaccini.

In the 42-minute recording, this person says that decomposition had already begun and when the corpse left Hospital Humanitas the smell was pretty bad. The army, of course, denies everything. The mouthpiece for the East Military Area, colonel Luiz Cesario da Silveira Leite, says that no military personnel of any kind helped capture an alien.

"We worry a lot about national and international beings but only if they are terrestrials...", said the colonel to the reporter. The colonel has also classified as "exaggerated" all the connections between the ET and the army.

"What the ufologists say is ridiculous", says general Sergio Pedro Coelho Lima, the commanding officer of the Escola de Sargentos. According to him, the Air Force is the military organization which looks after extraterrestrial phenomena.

The Centro Integrado de Defesa Aerea e controle de Trafego Aereo (CINDACTA) located in Brasilia has a dossier about UFOs.

"It is true that there are lots of cases which remain unsolved until today", confirms brigadier Cherubim Rosa Filho, a minister of the Military Supreme Court.

One of the most famous cases involving an ex-minister, was confirmed by brigadier Otavio Moreira Lima (the minister for the Air Force at that time) and is now celebrating its 10th anniversary without any conclusive facts.

But what made the Varginha episode unique are some of the details which only now are known to the public and which intensify the mystery involving the whole thing.

Luiza Helena, the mother of Liliane and Katia, the girls who insist having seen the ET, insists that at the beginning of this month, 4 men wearing suits came to her house and offered to pay a large sum if her daughters denied their contact with the alien.

"They said they would pay cash," says Luiza. "They also said they would come back, but we can't hide the truth." The 4 men did not identify themselves and only the girls

were present when they arrived. Their father, Joao Lopes da Silva, a bus conductor, was working when the attempted bribery happened. The coincidence between what the ufologists had discovered and these facts only got publicized last week.

The administrator of Hospital Regional, Adilson Usier Leite, confirms that the week after the appearance of the supposedly ET, the 2 city hospitals went through unusual commotion. In the Hospital Regional, a car belonging to the fire squad brought a corpse which, they said, had been exhumed and needed an X-ray.

The body was said to belong to a young boy, a university student and the son of an influential family in town who had been found dead in a cell, at the police station, after having been arrested for burglary.

At the Hospital Humanitas, also administered by Mr. Leite at the time, the unusual movement was connected with the arrival of new equipment to be used during the first heart transplant to be done in Varginha.

"When everybody started talking about this ET story, I thought it would be better not to mention that policemen and firemen had been at the hospital," says Mr. Leite.

But nothing convinces the ufologists. They insist that they are telling the truth when they say that instead of new equipment or a special criminal occurrence, both hospitals in town as well as the fire brigade were trying to HIDE THE BODY of an ET.

And they go further: Last Tuesday, Mr. Rodrigues and Mr. Pacaccini went back to Varginha after having been to Campinas.

"We know without any shadow of doubt, that the creature was autopsied by Dr. Badan Palhares," says Mr. Rodrigues referring to the very well-known coroner of the Universidade de Campinas (UNICAMP).

"By now, it is very likely that the body has already been flown from Brazil to the U.S.A.," finished Mr. Pacaccini.

"I don't know where this idea came from", denies Dr. Palhares in Campinas. Public Report Signed by Brazilian Organizations Interested in the Varginha ET:

The Brazilian ufologists here represented by the organizations they belong to, after more than 3 months of intensive investigation, have no doubts of any sort that what happened in Varginha in January of 1996 was a gigantic cover up operation involving military personnel and civilians, and which resulted in the capture of biologically unidentified creatures. These creatures were kept under strict medical observation and were later removed from the city.

This is a unique event in Brazil with unimaginable repercussion both scientific and philosophical. However, ufologists all over the world have come to the consensus that there is a widespread tendency for countries where these events take place to hide them from the public.

Ufology has been fighting for over 50 years now so as to make sure people in general have access to information about such events since the right to have access to the truth should be unquestionable to all humanity.

If you are a direct or indirect witness to the Varginha episode, get in touch with us since this event may have an enormous significance to all mankind. Be sure your anonymity will be preserved. Researchers, journalists and specialists are united in this task.

Our telephone number for contacts is: (035)222-1020 — Varginha — Minas Gerais. Signed by: Claudeir Corvo — Instituto Nacional de Investigacao de Fenomenos Aeroespaciais. Edson Boaventura Jr. and Jamil Vilanova — Grupo Ufologico do Guaruja — Sao Paulo Oswaldo and Eduardo Mondini — Centro de Pesquisas Exologicas — Sumare — Sao Paulo Centro Brasileiro de Pesquisas de Discos Voadores e revista UFO 0 Campo Grande — Mato Grosso Marco Antonio Petit de Castro — Associacao Fluminense de Estudos Ufologicos — Itaipava — Rio de Janeiro Rafael Cury — Associacao Nacional dos Ufologos do Brasil — Curitiba — Parana Irene Granchi — Centro de Investigacao sobre a natureza dos Extraterrestres — Rio de Janeiro Marco Antonio Rodrigues Silva — Grupo de Estudos de Objetos nao Identificados — Sao Paulo Vitorio Pacaccini — Centro de Investigacao Civil de Objetos Aereos Nao Identificados — Belo Horizonte — Minas Gerais Ubirajara Franco Rodrigues Centro Brasileiro de Pesquisa de Discos Voadores — Campo Grande — Mato Grosso.

By now people around the world have heard of the celebrated events in Varginha, Brazil — how in January Katia Andrade and two other young women say they encountered an oily, brown-skinned being with "rubbery" limbs, a big head, and a terrible smell.

The unknown entity wobbled about as if dazed, and the three women ran away in fright. Concurrent with the creature sighting came reports of a cigar-shaped UFO flying around, and a disturbance among the troops at the nearby Varginha army base.

Before long word went 'round that several UFO occupants had been seized by Brazilian soldiers and whisked away to an unknown (and presumably unpleasant) fate.

The Brazilian Army strenuously denies any such thing happened. Captain Eduardo Calza, press officer at Varginha, has had to field many inquiries about the alleged ETs. "I used to get calls about the base talent show," he laments. Not anymore.

Calza repeats again and again the official explanation of the events at the army base that weekend: men slated for a non-commissioned officers' school were trucked into Varginha, while a number of other vehicles were sent en masse to the repair depot.

At Varginha's civilian hospital, new medical equipment happened to be delivered at the same time as an exhumed human corpse was being delivered for examination. In other words, no ETs were involved. It all sounds good, but the locals are having none of it.

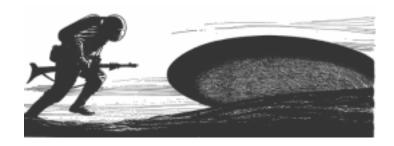
The army ruled Brazil for twenty years (1965-85), and during that time opponents of the military regime regularly vanished. Lies and propaganda replaced the free press. Thus the people of Varginha — indeed, of all Brazil — are not inclined to listen to army explanations.

The controversy shows signs of growing bitter. A TV reporter got into a shouting match with a top Brazilian general during a Victory Day broadcast (commemorating Brazil's contribution to Allied victory in World War II) when the reporter kept asking questions about the Varginha incident instead of listening politely to the patriotic speeches.

A psychic has predicted disaster for Varginha in September because of the brutal reception given the alleged ET visitors. Local UFO "experts" get TV time to expound

their personal theories, and witnesses who claim to have seen the ETs now demand payment for any interviews they give.

The poor, backwater town's city fathers see the ET landing incident as a ticket to tourist fame. They are reputedly planning a new city park, dedicated to the unknown ET's visit. (They are not, however, planning to name the park "El Roswello.") At the root of all this are some genuinely interesting encounters, worthy of serious investigation. We can only hope the truth isn't totally smothered in a welter of hype, hyperbole, and hostile face-saving by those who seek to exploit the Varginha case instead of understanding it.



ROSWELL IS DEAD

Roswell is dead. That's what you will be hearing soon thanks to a new document recently obtained by researcher Bill LaParl.

This document is the minutes of a meeting of the Scientific Advisory Board of the Air Force on 17-18 March 1948. The SAB was (is) a high level advisory committee that was set up by the (then) newly formed Air Force to provide evaluations of existing science and technology programs and to propose new ones.

The meeting consisted mostly of presentations or briefings by people working in these various programs. The presentations were not of a technical nature—although some details of the technologies were mentioned—but rather of an organizational or bureaucratic nature, such as how successful a program might have been or how to improve its efficiency, how to improve the morale or the workers.

The board was formed under the authority of General Hoyt Vandenburg, Chief of Staff of the Air Force, and was chaired by Dr. Theodore von Karman. The meeting was held at the classified Secret level.

The March 1948 meeting would be of little interest to ufologists except for one thing: as a part of the discussion of technical intelligence activities at Wright Field (Wright Patterson Air Force Base) the presenter, Col. Howard McCoy, mentioned Project Sign.

To put this brief mention into perspective, note that out of some 260 pages of transcript about 34 were devoted to a discussion to the acquisition and use of technical intelligence. One third of a page contains the discussion of Project Sign, which had been set up about two months earlier at the Air Materiel Command (at Wright Field) under the direction of General Craigie (who attended this Board meeting). Col. McCoy, who was the director of intelligence at the AMC, interjected the following statements into what otherwise could be called a "plain vanilla" briefing on technical intelligence activities: "We have a new project—Project Sign—which may surprise you as a development from the so-called mass hysteria of the past summer when we had all the unidentified flying objects or discs.

This can't be laughed off. We have over 300 reports which haven't been publicized in the papers from very competent personnel, in many instances—men as capable as Dr. K. D. Wood, and practically all Air Force, Airline people with broad experience. We are running down every report. I can't even tell you how much we would give to have one of those crash in an area so that we could recover whatever they are." After making

this brief statement McCoy went on to other "plain vanilla" intelligence activities.

So, there you have it.... from the guy who should know...he hopes one will crash, with the implication that none has crashed. ROSWELL IS DEAD.

However, this statement, far from absolving the Air Force, is a double edged sword. One edge, the Roswell edge, is dull. The other edge, the number of sightings he mentioned, is sharp... and it cuts into the Air Force's claim that all sightings that were collected are in the Project Blue Book microfilm record.

First, let's sample the dull edge. McCoy expressed a desire for one of these to crash. This could mean (a) none had crashed, (b) there was a crash but he didn't know about it or (c) there was a crash and he knew about it, but he lied about it!

Option (a) is, of course, a no brainer... and unfortunately that's the option that has been grabbed up by the people who are looking for easy solutions to explain Roswell.

Option (b) can't be ruled out. The technical intelligence branch, T-2, which McCoy headed (and is mentioned in General Twining's famous letter of Sept. 23, 1947 where he said saucers were real and not visionary or fictitious and recommended a special project) might not have been cut in on the Roswell information since they had no need-to-know in order to carry out the assigned duty which was to collect and run down the sighting reports.

Option (c) is even more cover-up oriented. Clearly not everyone, if anyone, on the SAB had a need-to-know for information related to crashed flying saucers. We may assume that such information would have been held only at the very highest levels of security classification. Hence, speaking at the Secret level, McCoy couldn't have mentioned crashed information if he did know it.

In fact, he might even have lied at the direction of higher-ups in order to intentionally mislead any of the SAB members who might get nosy if they thought there really was hard evidence.

Clearly this situation regarding Roswell can only be resolved when we get the complete history, including formerly Top Secret material that has not yet been released. (I am sure that there is some!)

Until then, Long Live Roswell.

Now let's turn to the sharp edge of the sword: McCoy's statement that as of March, 1948, Project Sign had "over 300 reports that haven't been published in the papers from very competent personnel..."

It is easy to see the discrepancy here when this number is compared with the master list in the Project Blue Book catalogue: that list show a "paltry" 135 or so sighting reports before the March meeting.

That means that OVER 165 REPORTS ARE MISSING FROM THE FILE!!!

The ones that are in the file are quite impressive... but this discovery raises the question of whether or not the missing 165 (or more) WERE EVEN MORE IMPRESSIVE.

Where are these sighting reports? Were they removed from the sighting file before the file was turned over to Project Grudge when Sign ended in early 1949?

About 5 months later, according to Captain E. J. Ruppelt, the legendary "Estimate of

the Situation" was written by Air Technical Intelligence, quite probably by Col. McCoy and others working with him. According to Ruppelt it proposed that flying saucers were ET craft.

This claim was based on sighting reports, according to Ruppelt. Unfortunately there is no copy of that document still in existence. Hence we cannot determine whether or not any of the missing 165 (or more) were used in that Estimate. Almost two years after McCoy's statement, and long after McCoy had been directed to leave the saucer project, Project Grudge, the successor to Project Sign, claimed to have analyzed and explained 244 sightings collected in 1947 and 1948.

However, this number of sightings does not include the missing 165 (or more) (nor does it include most of the sightings in 1949). Hence we are left with a real mystery... WERE THE BEST SIGHTINGS REMOVED FROM THE RECORDS TO PREVENT THE SUCCESSORS TO PROJECT SIGN FROM LEARNING ABOUT THE BEST TESTIMONIAL EVIDENCE?

Col. Taylor provided us with a clue to a sighting that is not in the Blue Book record, the sighting by Dr. K. D. Wood. Dr. Wood (born 1898) was a professor of aeronautical engineering at the University of Colorado from 1944-1967. He is listed in Who's Who for 1972. Unfortunately, there is no information on Dr. Wood's sighting. "This cannot be laughed off," said Col. Taylor. He was right. No one should be laughing. —

Note: Bruce Maccabee was recently selected to provide briefings for the Central Intelligence Agency on Unidentified Flying Objects.

RUSSIAN UFOLOGISTS TARGETED FOR HARRASSMENT

Russian media have reported gruesome details of unprecedented attacks on Russian UFO researchers. The terror is being unleashed by religious fanatics from several sects.

In 1993-94, hoodlums who believe UFOs are "messengers of God" attacked the Russian UFO Center and its employees on several occasions.

The Russian information agency "Novosti" has reported that UFOlogists have been threatened by telephone, by huge numbers of defamatory leaflets, and by offensive graffiti tagged on their homes and office buildings. Also reported by "Novosti" were attempts on UFOlogists' lives, including setting fire to their apartment doors.

Television reporters who cover UFO-related news are also fair game. A. V. Myagchenkov, a well-known TV personality and producer of the popular Russian TV program "Extro-NLO," has received many telephone threats.

American producers who visited the bright young Myagchenkov found he was not silenced, but L. S. Makarova, who produced the ever-popular TV program "The Unidentified Universe" was brutally silenced.

She was struck in the face with brass knuckles in Moscow, in broad daylight. She was so traumatized she took her program off the air. The fanatics won that round.

Threats have greatly affected the work of such prominent researchers of anomalous phenomena as cosmonaut Pavel Romanovich Popovich, academician V. P. Kaznacheyev, and engineer A. S. Kuzovkin. Law enforcement in Moscow, after appeals by the leaders of the city's UFO study groups, curtailed the terrorists to some extent, and sent some of

the perpetrators to prison.

Terrorists remained active in the provincial cities of Penza, Yekaterinburg, and Tver. In October 1995, scientist and UFOlogist A. Zolotov was murdered in Tver.

The latest report comes from Nalchik. Viktor Petrovich Kostrikin, a UFOlogist well-known in Russia and abroad, was savagely beaten and his apartment on Bogdan Khmelnitsky Avenue was ransacked.

The 70-year old researcher was at home on December 9, 1995 when two young men broke into his home at four o' clock in the afternoon. They beat him up methodically, and when there was nothing left to maim, the hoodlums tore apart his personal belongings.

The Russian UFOlogy Research Center has been trying to find the whereabouts of a well-known researcher from Vladivostok, Alexander Rempel.

He was a fearless explorer, author, and publisher. Rempel and his colleagues have studied "the Devil's Cemetery," the site of the Tunguska meteorite's fall in Siberia. His findings have been published in prominent Russian science magazines like "Tekhnika Molodezhi" of Moscow.

Rempel had excellent contacts among the Russian military in the Far East, and helped explore phenomena such as the Height 611 "crash." He was one of the first to study the sinister cults that have recently mushroomed in Russia.

Perhaps he found out too much; there has been no news of him since the end of 1994. His newspaper "Dzhentry" is no longer being published. What happened to his archives, his files, his unfinished work?

Something is very wrong with a society where researchers of anomalous phenomena are attacked and terrorized. In the old days, it was the threat of the Gulag that kept them silent.

Today it is the terrorist that shuts them up.

UFOS IN RUSSIA

UFO Encounters magazine published my article, "Stalin and UFOs" in September 1993. I wanted more information on the subject, to counter an underhanded campaign unleashed against Professor Burdakov in the United States.

I wrote to Professor Burdakov and asked him for additional details about the meeting between Josef Stalin (the bloody Soviet dictator) and Sergey Pavlovich Korolyov, scientist and designer of many Soviet rockets and space technological systems.

I received a reply from the professor in June 1994. The Russian UFOlogy Research Center [in Tarzana, California] was badly damaged by the January 1994 earthquake, and I could not write this article back then.

Since then I have received additional information about the Roswell documents in Russia. Professor Burdakov wrote: "...I know of the meetings between Korolyov and Stalin (there were at least three that I know of) from the accounts of people whom I very much trusted. Naturally the meeting that concerned UFOs was one of the least significant. It was Pavel Vladimirovich Tsibin himself who told me about the meetings between Stalin, Korolyov, and Tsibin. After that meeting Tsibin became one of Korolyov's deputies. In short [the debunker—P.S.] either uses conjectures, or gets information from Rus-

sian correspondents, among whom there appear to be quite many "experts" on Korolyov, Stalin, and our rocket and space scientists. I had personally not just met with Korolyov, Glushko, and others, but actually worked with them. I was among their closest associates and allies, and therefore I know much of what is still unknown not only in the USA, but even in Russia."

Several years ago I received a letter from Dr. Haines, a well-known American UFOlogist, author, and lecturer. At Dr. Haines' behest, Pavel Romanovich Popovich, head of the All-Russian UFOlogical Association and a former cosmonaut, contacted two Russian agencies regarding the Roswell documents.

Dr. Haines wanted to find out what (if anything) Soviet-era archives contained on the subject of the Roswell crash.

The replies Popovich received were unusually quick by Russian standards. Popovich's letter to the Ministry of Defense of the Russian Federation was dated June 8, 1993. The letter was given reference number 1086. The reply from the Ministry was dated September 17, 1993. The reply's reference number was 328/2001.

It read: "Dear Pavel Romanovich! "Your letter, addressed to the archives of the Ministry of Defense of the Russian Federation, has been examined in the General Staff. Officials of the Central Archive of the Ministry of Defense had conducted [a] search of the materials that are of interest to you. As the result of the conducted research work, it has been established that the documents in the archives do not contain the materials regarding the issue that is of interest to you.

Yu. Semin, Temporary Head of the Center"

I have translated the document just as it was written in Russian, so that the flavor of the bureaucratese is not lost. It is important for future historians of the Roswell crash cover-up.

Thus far we have found out that Popovich's letter has been "examined" in the General Staff. The second reply came from the Ministry of Security of the Russian Federation.

The reply was dated September 14, 1993. The official number of the document is 10/A-2917. "Reply to #1086 of August 6, 1993. "This is to inform that the carried out verification of the materials of the Ministry of Security of the Russian Federation's Central Archive has not discovered any documentary materials about the case of the "flying saucer" crash in the area of Roswell, USA, in the year 1947. "Deputy Chief of Archives "V. P. Gusachenko"

I have received a package of materials from the International Roswell Initiative, a group in Atlanta, Georgia. There is a document titled "An Open Letter to All Those with an Interest in the UFO Phenomenon."

On page 2 of this letter there is a paragraph, part of which I will quote here: "On September 8, 1994, in reaction to public and political pressure, and in what Newsweek magazine called a "pre-emptive strike," the Air Force issued its first official statement on Roswell in 47 years—a 23-page report stating that the "most likely" source of the Roswell debris was a balloon from a secret program known as Project Mogul. The purpose of Project Mogul was to detect Soviet nuclear tests by using sensitive instruments carried aloft by high-altitude balloons."

Let us suppose for a moment that the U. S. Air Force knew back in September 1993

that the Russian agencies had carried out searches in their archives for Roswell-related documents, and whatever was discovered was either hidden in more secure vaults, or just turned over to the Americans.

Another possibility may be that a Russian official simply sold the documents to the Americans.

Yet another scenario we might come up with is that there was a joint action by officials of both nations to conceal the existence of such documents.

There is no way to know for sure what has happened to the documents, and of course, no proof that such documents ever existed.

I tend to think, based on my knowledge of the history of the USSR under Stalin, that when the dictator expressed an interest in something, his subordinates made sure that "something" was available.

The files (unless destroyed by Stalin's heirs) would be kept in the state archives. The books Sergey Korolyov mentioned, the "pile of documentary evidence"—what happened to them?

Khruschev would have had no reason to destroy it, nor Malenkov before him or Brezhnev after. Are the files still hidden somewhere?

Did the U.S. Air Force wait one year after the replies to Popovich to make sure copies of Stalin's Roswell documents are nowhere else in Russia?

There is an interesting report from Russia about the joint action between security agencies of the USSR, USA, Great Britain, and France regarding cooperation on UFO matters.

Allegedly a meeting took place in 1956—more about that later. My Russian colleague Yuri Stroganov is about to publish a monumental work, "UFOlogist in Military Uniforms."

Yuri knows a lot, and has lectured the Yiesk military about UFOs (Yiesk is where he resides, a town not far from Chechnya).

Yuri knows the dangers Russian researchers face today, but his will has not been broken. I have found out nowadays that Professor Burdakov is not as willing to talk about Stalin's interest in UFOs as he was three years ago. He may have been threatened.

I greatly respect the man, who is a brilliant scientist and a friend to UFO researchers. But so many people are being threatened in Russia today...

[Paul Stonehill runs the Russian UFOlogy Research Center, 5700 Etiwanda Avenue, Suite 215, Tarzana, CA 91356.]

The appearance of a UFO has startled the residents of Drosendorf, a small town located in lower Austria. Rudolf Slam (76), an eyewitness of the UFO, claims that a flying object "anchored" itself in a field near his apartment, later lifting from the ground and flying off at an "incredible" velocity.

The object also emitted a thundering sound when it departed along with a 300-meter long trail of flames.

Slam recounted his experience to the newspaper "Kronen Zeitung": "Around midnight I stepped onto the balcony to have a cigarette and I saw a shining triangular object about 2 meters high. I also saw some unknown figures. When I tried to tape that object

with a video camera, my batteries failed. Within seconds 'the unknown object' lifted off and flew away''.

Slam waited before telling of his story, as he feared public ridicule and mockery. He finally exposed the story to his neighbor.

The story then spread. When the mayor of Drosendorf, Franz Krestan, found out, he was alarmed. Investigation of the field was then ordered. Investigation of the field revealed that there were 3 indentations in the ground, forming a triangle.

The circular indentations were 10 cm deep. The indentations were located 1.7 meters apart from each other. Finally, grass in the centre of the triangle was burnt. According to the mayor's statement, no human footprints were found.

VILNIUS UFO

From Staff Reports

The entire police force of the city of Vilnius, capital of Lithuania, was put on alert on Wednesday, June 26, after two policemen reported an unidentified flying object, according to the Russian news agency Itar-Tass.

The policemen said they witnessed a shining round object flashing and hovering twenty to thirty meters above the main route between Vilnius and Miadininkai.

The sighting occurred around half past midnight local time about six miles from the capital, near the village of Nemejis. "You could hear a strange sound, like electricity crackling," the policemen reported.

After observing the UFO for almost half an hour, the policemen approached. When they were approximately fifty meters from the object, it moved upwards and away from them, accelerating towards Vilnius, according to Itar-Tass.

The Vilnius police immediately deployed vanloads of rapid reaction force police and tracker dogs to the scene, but the UFO had already disappeared when they arrived.

Police conducted ground composition tests after discovering that the grass was visibly flattened approximately ten meters around the vicinity of the sighting.

They also measured radiation levels in the air and made sound recordings. Police dogs on the scene remained unstirred by anything, Itar-Tass reported.

Valentinas Ioukhniavitchous, chief of the Vilnius police force, announced on Lithuanian radio that the two policemen who had reported the sighting were "of sound an honest mind," according to Itar-Tass. Source: Agence France Presse, June 26, 1996.

AUSTRALIA OVERRUN

The month of June was extremely busy in the skies over Australia. Scores of witnesses in several cities have spotted orange-colored UFOs in the night sky.

For three weeks, the cities of Melbourne, Sydney, and Adelaide have been visited by bright lights of unknown origin.

On the night of June 15, orange UFOs were spotted over downtown Adelaide, and over the suburbs of Kew (Melbourne), Sutherland, and Parramatta (Sydney).

Witnesses in Kew saw a formation of five orange lights flying "straight up into the sky." An even larger triangular formation of ten UFOs were seen on June 18, cruising over Preston, northeastof Melbourne.

On Sunday, June 16, the UFOs paid another call on Melbourne, and one lone orange object was captured on videotape over Adelaide.

The Australian national TV network, TEN-TV, broadcast this as yet unexplained videotape on June 19. Some sources claim that the Royal Australian Air Force has announced it was forming a commission to study the UFO sightings — but this report has been disputed.

Other UFOs of similar color have been reported from various locations, including the capital, Canberra; Campbelltown in South Australia; and Mudgeeraba in Queensland.

SKYQUAKES IN SOMALIA

The self-declared Republic of Somaliland has been plagued over the past few months by mysterious airborne explosions, known as "skyquakes" to Fortean researchers.

In December 1995 two loud explosions high in the air shook the city of Berbera, on the Gulf of Aden. The districts of Sol and Sanaag have also been hit with the aerial detonations.

The breakaway government, which proclaimed itself independent from Somalia in 1991, has not been recognized by other states.

Despite this, the Somalilanders have asked for international aid in investigating the skyquakes. According to Republic spokesmen, the explosions have provoked illness in humans and "strange" behavior in domestic animals. The Somalilanders think UFOs are behind the skyquakes, although no actual sighting reports seem to have been logged.

One theory regarding the Somali skyquakes claims that a Chinese satellite fell out of orbit over the western Indian Ocean about the time of the explosions.

Another idea holds that bombs may have been set off by Somalia infiltrators, trying to intimidate the little Republic back into the fold.

HUGE ASTEROID NEAR MISS

Saturday, April 18th On May 19th a large asteroid, one third of a mile in diameter, passed by Earth at a mere distance of 279,000 miles.

In astronomical terms, this is a very close call.

The asteroid, dubbed 1996 JA-1 represents the largest object known to pass this close to Earth. Only five other objects have been recorded to pass this closely.

Of course, this near-miss should not cause any panic. Scientists have carefully projected the asteroid's orbit and have determined that there is no chance it will hit Earth.

If 1996 JA-1 had hit the Earth, there would have been massive devastation. The asteroid's impact would have carried about 4000 megatons of force, the equivalent of almost all the world's nuclear arms being detonated simultaneously.

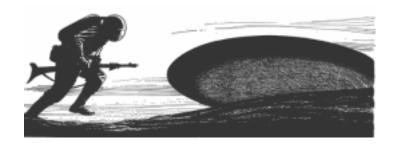
Even so, it is believed that this asteroid is only one tenth the size of the asteroid which collided with the Earth 65 million years ago and subsequently caused the extinction of the dinosaurs.

The asteroid was at its closest distance to Earth at around 12:48 p.m. EST on Sunday, May 19th. It passed at a speed of 36,000 miles per hour, too fast for large telescopes such as the Hubble Space Telescope to track the asteroid.

This announcement comes in the wake of the announcement that another asteroid

will be passing a mere 1.9 million miles from Earth on Saturday, May 25. This asteroid is around 0.75 miles in diameter.

In addition, scientists recently announced that the asteroid 433 Eros has a significant probability (50%) of colliding with the Earth in 100 million to 1 billion years from now. Eros is larger than the Nemesis asteroid which destroyed the dinosaurs. Eros is around 14 miles (22 km) in diameter.



CLOSE PLANETARY SYSTEM

Astronomers have discovered another planetary system. This one is located around the star Lalande 21185. However, this discovery is particularly intriguing, as Lalande is the 4th closest star to us, located only 8.1 light-years away from our sun.

The four other planetary systems are located between 35 and 50 light-years away from us.

Lalande itself is a red dwarf star. One planet orbiting Lalande is larger than Jupiter and is orbiting at approximately Saturn's distance (a 30-year orbit).

The other planet is a much smaller body with a 5.8-year orbit. It is located at approximately the distance from the sun to the Mars-Jupiter asteroid belt. However, it is unlikely that either planet will be hospitable to life.

Furthermore, the astronomer who reported this, Dr. George Gatewood, has come under fire because there are some doubts regarding his results, and they are yet to be confirmed by other astronomers.

In any case, it is clear that we quickly determined the likelihood of a planetary system being developed. Such data would be useful for things such as the Drake Equation—the greater number of planetary systems, the higher the probability that more planets will be hospitable to life.

Current instruments used to find planetary systems are only able to find planets the size of Jupiter, which skews results. New detectors are being built by NASA to detect smaller planets. "It's too soon to tell how common planetary systems are," said Dr. David Black. "We need to survey at least 1,000 stars, which will be done in the next decade. Then we would get a statistical basis for estimating the occurrences of planetary systems."

SOLAR SYSTEM TO PASS THROUGH DENSE CLOUD

For the last 5 million years, our solar system has been passing through a region of space which is relatively empty. However, we are now expected to pass through an interstellar cloud in 50 000 years.

The cloud is expected to be a million times as dense as the space in the solar system now.

"There will be an encounter," said Jeffrey Linsky. "We don't know when or exactly how the Earth will be affected."

Such a cloud would affect the solar wind, and perhaps compress the heliosphere.

Additionally, weather on Earth may be affected. Earth's magnetic field may be altered, and our atmospheric chemistry changed.

Some researchers have suggested that previous ice ages have been caused by our movement through an interstellar cloud.

Priscilla Frisch notes that interstellar clouds may have an impact on the existence of life. Passage through interstellar clouds would create unstable conditions on planets, and may prevent the formation of fragile life.

"Without stability in the local stellar environment, I doubt there could be stable planetary climates hospitable to life," she said.

MUFON 1996 MEETING

The Mutual UFO Network had decided to hold their 1996 International UFO Symposium in Greensboro, N.C. this year on June 6-7.

Considering ourselves blessed that the convention was being held a mere hour's drive from ParaScope East Coast Command, we dispatched nearly our entire editorial staff to cover the event. Over the course of the two-day Symposium, a wide range of Ufologists presented papers on various phenomenon and investigation tactics.

ParaScope dispatched scene reports every few hours to keep users who were unable to attend the conference up to date on the days' events. The following is a compilation of those reports. ------Saturday Morning: Things got cranked up around 9:00 a.m., as the MUFON locals made their opening statements to the approximately 200 attendees.

The theme this year is "UFOlogy as a scientific enigma," and mistress of ceremonies Natalie "Ginger" Richardson set the tone for the symposium, saying, "We must pursue the truth as it is rather than pursue the truth as we would like it to be... Only unbiased scientific research can give us the answers we seek."

With that sentiment in mind, author and researcher Kevin D. Randle gave a fascinating lecture on how pop culture affects our views on the alien abduction phenomenon—and, ultimately, how it affects our research on that subject.

Randle, a Vietnam veteran with a military intelligence background, opened the lecture by saying, "I'm probably the first researcher to report aliens in the house."

After making a few remarks regarding his credentials as an abduction researcher, Randle made the point that pop culture does, indeed, influence abduction reports. "Apparently there is something in the human mind that creates these tales on a regular basis," Randle said.

Some of these tales may, in fact, be rooted in our own media-saturated culture. After all, we exist in a virtual soup of information. UFOs and alien phenomenon now occupy a significant part of our pop culture, yet these phenomenon await incontrovertible scientific evidence proving their existence. Randle pointed out that as early as June 1935, movie posters captured the essence of the abduction phenomenon, with big-eyed aliens holding a woman down on an operating table.

The 1954 sci-fi B-movie "Killers From Space" includes all the details of the commonly reported abduction experience, missing time and all. The similarity between many abduction reports and their popular culture predecessors, Randle said, "is overwhelm-

ing."

People who report abductions have almost certainly been exposed in one form or another to the phenomenon in pop culture, according to Randle.

One notable example: an "Outer Limits" episode titled "Bolero Shield" was broadcast just days before the famous abductions of Barney and Betty Hill. Some elements of their abduction perfectly matched the sci-fi program.

Although the Hills say they never saw the episode, Randle's point is that we cannot verify whether or not that is true. Randle concluded by saying, "We must do better than coming up with clever catch phrases... If we can't explain [the abduction phenomenon] better than we have, we will not be able to convince others of the reality which we believe."

We cannot simply dismiss the possibility that some of the roots of the abduction phenomenon lie in the B-movies of Hollywood's by-gone days. Considering what we're up against, it's going to take hard fact to show the world what's really going on.

Next up was John S. Carpenter, M.S.W., MUFON Director of Abduction Research. Carpenter, who has a strong background in psychiatry and hypnosis, gave a fascinating lecture on multiple-participant abductions and their significance.

In short, a multiple participant abduction is an abduction of two or more people, who share detailed common experiences of the event. Although single-abductee experiences are open to debate, Carpenter described many cases of multiple-participant abductions which he believes prove that these abductions are really happening. Injecting a healthy dose of humor into his presentation, Carpenter responded to the arguments of alien abduction critics with a combination of common sense and psychiatric research.

Critics sometimes argue that abductions are the manifestation of delusional behavior.

But delusions develop over time, according to Carpenter, due to deteriorating psychological conditions. The chances of the same delusions striking several people simultaneously are slim.

Carpenter also dismissed the idea that alien abductions were the manifestation of archetypes rooted in the collective unconscious (the theory being that all human beings share basic symbols of human experience, which may be passed on genetically).

"I mean, what? You're driving down the road with three of your friends, and all the sudden you're all hit by Jungian archetypes?" Carpenter said.

The amount of detail described by participants and their ability to see each other and describe each other's emotional states, said Carpenter, suggested that the archetype theory just doesn't work in many cases.

Critics also theorize that memories of alien abduction are actually covers for repressed memories of sexual abuse. Carpenter argued that in most cases (he cited unpublished research at some points) such underlying causes have not been found.

In fact, sometimes the exact opposite is discovered: "Remembrances of human abuse were actually untrue and were covers for alien intrusion," Carpenter said.

Carpenter countered the pop culture arguments made earlier by Kevin Randle, say-

ing that this theory does not explain emotional accounts of abduction experiences from young children, some only two or three years old.

Also, abductees recall unpublished details that are not generally available to the media-consuming public at large. Furthermore, Carpenter said, most subjects had little or no interest in the UFO or alien abduction phenomenon previous to their abductions. Carpenter cited the work of John Mack (who spoke Saturday evening at the symposium), who interviewed 62 school children in Africa who witnessed UFOs and unidentified beings.

These children had never been exposed to America's media-drenched pop culture, yet many of the details of their experience were the same as details from incidents in the U.S.

Carpenter got a strong round of applause from some of the symposium attendees when he said that regardless of what one might watch on TV, "it does not lead to two years of trauma and nightmares," as the experiences of Barney and Betty Hill did.

Saturday Afternoon: Saturday afternoon's sessions included a presentation on Stag Harbor by Chris Styles, MUFON Assistant Provincial Director for Nova Scotia. Jeffrey W. Sainio, MUFON Staff Photo Analyst, delivered an excellent video/photo update on UFO phenomenon, titled "X-Files, Lies and Videotape."

During his presentation, Sainio demonstrated various techniques for detecting flaws and verifying the reliability of the photographic evidence. He stressing the importance of reference checks — photographs of the same location taken under similar conditions as the purported incident — in ferreting out important visual information.

At 3:30, Vincent F. DiPietro gave an interesting talk on evidence for life beyond the Mars Face. He discussed the theory that life began on Mars at approximately the same time it developed on earth, but that it was abruptly halted by a gigantic meteorite collision.

The impact of this meteor was so great, according to DiPietro, that it knocked vast amounts of debris into orbit around the sun, which was slowly gathered through collisions by the inner planets of the solar system.

This Mars debris, DiPietro said, actually contains physical evidence of organic life — perhaps our first evidence of extraterrestrial life forms. Budd Hopkins rounded off the afternoon with a discussion of the Linda Cortile abduction case, in which twenty independent witnesses reported seeing a glowing, fiery red/orange UFO hovering over an apartment complex. This UFO, according to Hopkins, physically abducted Cortile. After Hopkins concluded his presentation, Linda Cortile came to the podium personally to field questions from the audience.

Saturday Night: Things settled down Saturday night shortly before midnight, as John E. Mack, M.D., wrapped up a discussion on deepening our knowledge of the "subtle realm" of the alien abduction phenomenon — the study of phenomenon that may manifest themselves in the physical realm, but which seem to originate in another dimension, or from "a place unseen."

Earlier in the evening, the audience listened with rapt attention as A.J. Grevaerd, MUFON National Director for Brazil, presented an update on the current Brazilian UFO

flap. He focused on events in the village of Varginha, where the Brazilian military purportedly captured two beings from a crashed UFO.

According to Grevaerd, whose information is based on interviews with military personnel and others directly involved in the incident, a United States satellite picked the UFO up as it entered the atmosphere. The information was passed to the Brazilian military, which then combed the impact site for wreckage and bodies.

Three girls cornered what is believed to have been an alien being in the village of Varginha, which coincided with a rash of UFO sightings in the area. The military purportedly took one of the beings to a nearby hospital, but were turned away because the hospital was too poorly equipped to handle "creatures not of this world."

"The facts I've just told here are 100 percent certified," Grevaerd said. "It was very difficult to reach the first hand witnesses — which were of course from the army — and from the fire department. It took us forever to convince them, but we finally convinced them to talk."

Although great amounts of information and eyewitness testimony has been uncovered by UFO researchers on the case in Brazil, most of it currently is word-of-mouth information from sources which have demanded anonymity.

Thus far, the overwhelming circumstantial evidence is marred by a lack of physical or recorded evidence. Hopefully over the coming months, more hard evidence will be developed regarding this case. [For more information on the Varginha incident, see the Nebula News folder in the Nebula main list box.]

"Every day, we find a new piece of this puzzle," Gevaerd said. "If we survive this all, we are going to have a fantastic surprise for the world in September or October."

Philip Mantle followed Gevaerd's presentation with his analysis of Ray Santilli's "Alien Autopsy" film. Mantle gave the film a fair day in court and exposed various holes in the arguments of critics of the film. [To read the ParaScope special report on the "Alien Autopsy" film, which is a bit more skeptical than Mantle's assessment, see the Abra Cadaver folder in the Nebula main list box.]

Santilli initially contacted Mantle two years ago to see if he would be interested in making a UFO documentary based on footage of an alien autopsy which he had obtained. This alien was purportedly retrieved from the crashed Roswell "flying saucer" in 1947. Mantle points out that Santilli was extremely ignorant regarding the Roswell incident, to the extent that he originally called the New Mexico town "Rosewell."

Santilli's ignorance aside, Mantle told the audience that "There are actually two separate autopsy films. I know because I've seen them both." Mantle is currently in possession of a copy of the second autopsy film, which was released by Volker Spielberg, but he could not show it at the symposium because the tape was not in NTSC format. However, Bob Shell, a colleague of Randle, showed five still photos from the second autopsy.

One still showed two whole legs, proving that two separate "aliens" were autopsied. Another still showed the inside of the subject's skullcap as it was being laid into a tray; yet another showed a small ball being removed from the pubic region.

According to Mantle, the second autopsy film shows two people in white coats performing the autopsy, and one person in a dark trenchcoat.

Mantle predicts that debate over the controversial film will continue for years. That much is certain.

Sunday Morning: The second day of the symposium opened Sunday morning with a chronology of UFO sightings in Mexico by Carlos A. Guzman Rojas, MUFON State Director for Mexico City.

The soft-spoken Rojas traced UFO sightings from before the days of Christopher Columbus all the way through the current resurgence of the phenomenon in Mexico.

Rojas described a number of interesting anectodal and historical UFO sightings. Christopher Columbus one evening called a crew member to the deck of his ship to verify that he was not hallucinating the object which was flying through the sky.

Another strange event occurred around the turn of the 16th century, when a soldier stationed in Manila was unexplainably transported to the main plaza in Mexico City.

He was imprisoned by the Court of Inquisition for having a Luciferian intervention.

The highlight of Rojas' chronology came when he showed several videotapes shot recently in Mexico at different times and in different places, showing similar objects behaving in similar ways.

One of these videotapes was shot as a hundred witnesses watched an object separate into segments high in the sky, nearly duplicating a scene filmed three weeks before. John White followed Rojas with a presentation entitled "UFOs — In Search of an Overview."

White expressed the need to seek an "overview" of the UFO phenomenon, saying that he saw three "levels" in the UFO phenomenon: terrestrial, extraterrestrial and metaterrestrial.

The metaterrestrial phenomenon, according to White, are rooted in "the unseen world beyond the 3-D world we know." In addition to some well-documented cases, White focused on several extremely speculative hypotheses regarding the nature of UFO sightings. White says that Ufologists have been rejected by mainstream science, and said that "rejection by the scientific community... is simply illogical and unscientific."

However, many of the matters which White discussed delve so deeply into the metaphysical realm that mainstream science probably doesn't have much use for it. He discussed several examples of psychokinetic phenomenon to support his claims, such as a mental projection involving Uri Geller.

The audience was basically left to take White's word for it, since many of the subjects he was discussing cannot be "proven" in the traditional sense. White also voiced some ominous speculations that perhaps the "aliens", as a higher life form, guide humanity (presumably a "lower" life form). Switch "aliens" with "power elite" and you have a perfect match for the situation right here on Earth, sans extraterrestrial intervention.

It seemed that White was putting the cart before the horse by calling for an overview of the UFO phenomenon at a time when hard evidence is still desperately needed to establish a credible theory regarding the UFO phenomenon. White's speech seemed to be heavily influenced by the teachings of the Human Potentialist movement.

Although it is crucial to remain open minded about theories which may seem bizarre at first, it is also crucial to develop hard evidence to establish a clear, verified chain of

Chilean-American journalist J. Antonio Huneeus took the floor at 1 p.m., presenting an insightful reference guide to foreign UFO documents. From Costa Rica to Belgium, Huneeus gave a run-down on foreign governments' attitudes toward the UFO phenomenon, and the accessibility of their archives to researchers.

Although government secrecy in the United States impedes some domestic investigations, Huneeus points out that at least U.S. citizens have the Freedom of Information Act to help them out. Many countries do not allow their citizens to have any access whatsoever to government documents.

There are a number of problems which beset researchers seeking foreign documents, including mundane impediments such as the language barrier. Even when translation is not an issue, most foreign document archives are closed to the public.

One tactic for getting around this is to request documents from our own government which deal with UFO-related matters in foreign governments. In the past, documents have been obtained from the CIA, Defense Intelligence, the State Department, and other federal agencies which deal with foreign UFO cases.

Another problem is that some developing countries are plagued by severe internal strife. "A country whose government is falling apart does not have time to investigate UFOs," Huneeus said.

[For more information on the Freedom of Information Act, check out our FOIA Help Center, accessible through the list box on the main screen.

To generate a FOIA request on the World Wide Web, browse over to http://www.parascope.com/foia/]

Huneeus noted that although a few countries outside the U.S. have had extensive UFO investigation programs, most do not conduct scientific investigations of the phenomenon.

Brazil has a long history of official UFO investigations, many of which have been disclosed to the public. One of the hallmarks of the Brazil investigations is that the government actually considered close encounters of the third kind as worthy of investigation. Project Blue Book didn't include such encounters.

France also has a long history of official investigations which treat the phenomenon as a legitimate subject for scientific research. Although investigations have been downsized in the last decade, citizens are able to report UFO sightings to the police, who make a preliminary assessment.

If the report has any validity, it is reported to the French space agency for investigation. Many documents released by the French government, said Huneeus, show a great deal of open-mindedness towards the UFO phenomenon; one document he showed the audience even speculated as to the probable means of propulsion (electromagnetic),

based on the physical evidence retrieved from the scene.

Huneeus had to hurry through the end of his presentation to make way for Dr. Roger K. Leir, who gave one of the most interesting lectures of the symposium. The subject was implant devices and the medical and surgical aspects of the UFO abduction phenomenon.

Leir didn't have much to say about abductees or their experiences; as a medical doctor, he was more interested in the hard physical evidence that had somehow been injected into the people who he has so far arranged implant-retrieval operations for. "I guess you could say I'm now in the medical evidence field," Leir said. "Whether these things are implants or somebody's teeth, we're going to find out."

Leir concentrates on thoroughly documenting the cases he works on, building a strong chain of evidence with plenty of witnesses. The "implant" phenomenon has been ridiculed in the past because invariably, the implants disappear, or disintegrate, or are eaten by dogs, or what have you.

"There have been people before who were attempting to remove implants," Leir said, "and you find all kinds of excuses for what happened to them." Treating the situation as a scientific challenge, Leir developed a method of retrieving blood from the subject, spinning it down in a centrifuge, and processing it for use as a transport medium for the extracted implants.

None of the implants Leir has retrieved have disintegrated except for one, which was placed in formaldehyde. (The remaining fluid is currently under analysis.) Leir has found that the implants possess a number of interesting — and currently unexplained — traits.

They are invariably covered with a membrane of gray biological material of an as yet undetermined nature. When the first implant was retrieved by Leir's team, he tried to cut the object with a surgical blade but was unable to penetrate the membrane.

The first discovery Leir's team made was that there was no sign of inflammation surrounding the object. "This just doesn't happen," said Leir. "When you get something inside your body, your body doesn't like it, and it tires to reject it."

If the body is unable to reject or dissolve the foreign object, the surrounding cells wall the object off from the rest of the body. But in the cases where implants were retrieved, it appears as if the body accepted these foreign objects with no reaction whatsoever. Also, no entrance scars could be found in the areas around the implants.

Leir also found that the implants glowed fluorescent green under a blacklight; abductees often claim that parts of their skin glow fluorescent green for some time after their experiences. The implants were ground out, and the membrane was scraped off, revealing small multicolored metal rods inside, according to Leir.

These metallic rods were highly magnetic. Leir also found that before the implants were removed, an electromagnetic field could be detected emanating from the vicinity of the foreign objects; yet after they were surgically removed, the electromagnetic field could no longer be detected.

Leir's research is ongoing, and he has made arrangements with certain mainstream scientific departments. If Leir's data is proven to be solid, it will be published in scien-

tific journals and released to the public.

"One of the things we're going to try to do is to marry science — I mean hard science — to this field," Leir said. "I feel the method we're using is going to generate some absolutely terrific results."

Following Leir's presentation, Bruce Maccabee gave a somewhat dry but thorough lecture on UFO acceleration. Using footage from the Gulf Breeze are in Florida and a little trigonometry, Maccabee explored ways of studying the oft-reported acceleration of UFOs from a dead stop to blinding speeds.

Although the small size of most of the images available for study on videotape made measurements difficult, in one case Maccabee calculated that the UFO's acceleration was roughly about 9800 feet per second squared — the equivalent of 300 "g's", which is more than enough force to turn a human being into protein goo.

Maccabee offered no explanations for this rapid acceleration, but he presented detailed mathematical methods for studying the phenomenon to generating useful data.

A lively question and answer session followed Maccabee's presentation, in which all the symposium lecturers fielded questions from the audience.

It's a shame that more time was not allocated for audience interaction throughout the symposium, but with so much information to disseminate in such a short time, there wasn't much time left over for questions and debate.

Perhaps future MUFON symposiums will allocate a little extra time for debates and audience interaction. We're still left with more questions than answers.

Something is going on, that much is certain. But what exactly "it" is will be the subject of research and debate for years to come. And MUFON will undoubtedly continue to be a grassroots engine for exploring the scientific enigma presented by UFOs.

NEWSWEEK POLL REVEALS NOTHING NEW

Newsweek magazine released the results a poll on Unidentified Flying Objects and Americans' attitudes about them on Sunday, June 30. As is often the case with paranormal topics, the poll's conclusions were mixed.

The raw findings were that:

- —Forty-eight percent of those questioned thought UFOs were "real." Real what? Real big? Real strange? What this question probably means is 48% of the people asked think "UFOs are really unknown." Well, duh.
 - —Fifty-one percent thought there was a natural scientific explanation for all UFOs.
- —Forty-nine percent think the government is hiding information about UFOs from the public.
- —Only twenty percent said they believed UFOs were alien spacecraft or (curiously enough) "alien life forms."

The living-creature UFO theory has been around a long time, but it has never been popular. Maybe the Newseek question was ambiguous about the label "alien."

Also interesting was the finding that belief in the paranormal declines with age. In the age group 18-29, forth-three percent considered themselves believers in paranormal phenomena, while only thirty-nine percent of 30-49 year olds did.

In the range 50-64 years old, thirty-five percent declared themselves believers. The sample group consisted on 769 adults, with a margin of error of plus-or-minus four percent.

William Cooper, author of Behold a Pale Horse, explains why he has retracted earlier claims that ET's are in communication with the secret government, and how the entire ET-UFO scenario is a massive hoax designed to hide real Earth-based technology and a deliberately created tool of the Illuminati to further aims in the New World Order.



SPACESHIPS THAT CONQUER GRAVITY

The spherical craft squatting on a concrete strip emitted a faint hum. A ghostly glow surrounded its shell. The strange craft rose and hovered momentarily while its landing gear retracted. Then the hum increased and the craft shot eastward and vanished beyond the horizon before the witnessing scientists could click their stop watches.

Jet-powered missle? No. Made weightless and propelled by its anti-gravity engine the round ship was a research vehicle able to travel at almost the speed of light - 600,000,000 miles per hour.

How soon will such a revolutionary craft take to the skies?

Since 1953 the Canadian government's Project Magnet has been working on a Gravity-defying vehicle powered by electromagnetic forces.

At least 14 United States Universities and other research centers were hard at work cracking the gravity barrier. Convair on the West coast, Glenn L. Martin Aircraft Co. of Baltimore, MD., Bell Aircraft Co. of Buffalo, NY and Sperry Gyroscope Co. of Great Neck, NY. maintain teams of researchers and engineers prying into Nature's most jealously guarded secret - GRAVITY.

"Aviation is on the threshold of amazing new concepts," said the late Lawrence D. Bell, level-headed builder of the Bell rocket research planes. "We are already working with nuclear fuels and equpment to cancel out gravity instead of fighting it."

Even before the famous apple fell on Isaac Newton's head, men were trying to solve the gravity problem. But from the simple pre-historic lever to the most intricate modern machinery, the best we could do was to win a temporary victory.

"What goes up must come down," said the biggest scientific brains, helpless before the mysterious gravity pull. Newton and other great physicists formulated the gravity laws, measured gravity pull and passed their findings to posterity.

But their gravity "laws" had several exceptions that bothered inquiring minds. Take the strange behaviour of liquids, for example.

Move your fingertip slowly toward the surface of water and watch the water jump up to hug your finger. Or put a soda straw into the water and see the water level inside creep above the outside level in defiance of the earth's gravity pull.

To get an even more striking contradiction of the gravity laws, drape a towel over the edge of a basin half-filled with water. After a time the water will climb UP the towel and over the side.

These and other strange anti-gravity tricks were considered freaks of molecular attraction - phenomena quite apart from gravity-until Albert Einstein came up with his Theory of Relativity.

Einstein said that molecular attraction is really no different from the gravity pull of the planets and stars. He theorized that this attraction works on the same principle as electromagnetism.

A molecule, a planet or a star all have gravitational fields just as magnets or electromagnets have their magnetic fields. To illustrate the similarity, Einstein said that a gravitational field would attract and bend light rays just as a magnetic field bends cathode rays in your TV picture tube.

Dr. Stanley Deser and Dr. Richard Arnowitt of the Princeton Institute for Advanced Study have recently discovered new sub- nuclear particles of the atom. Bombarded by powerful electro- magnetic accelerators such as the Cosmotron and Betatron, atomic structure yielded strange particles which may be the answer to the gravitational field problem.

"Until recently, gravitation could be only observed but not experimented on in a controlled fashion," Drs. Deser and Arnowitt wrote in their scientific paper. "But the new particles of the atom which have been linked with the gravitational field can now be examined and worked with at will."

The new discovery means that before long we shall be able to switch gravity on and off as we do electricity and electromagnetism. The next logical step is a master of engineering.

Let's take an ordinary flywheel suspended on roller bearings and coupled with a pwerful electric generator. One side of that wheel would be "under fire" of our de-gravitational apparatus. The particles responsible for the gravitational attraction would be neutralized, a portion of the wheel would be made weightless.

But once out of the anti-gravity field, the same part of the wheel would gain weight and be pulled down by earth's gravity, thus giving as a powerful rotating motor.

Another idea for an anti-gravity device comes from Dr. George Rideout, president of the Gravity Research Foundation of New Boston, N.H.

"To make a gravity motor," said Dr. Rideout, "we need a differential of gravity forces and the way we can get it is through a gravity insulator or absorber." To see how this device might work, let's turn to gravity's twin brother - electromagnetism.

For years we've had trouble with watches that get magnetized. You made a phone call or tinkered with your car's generator and presto - the delicate balance wheel of your watch, exposed to an electromagnetic field, became a little magnet. Now your watch was no longer a reliable timepiece.

To protect a watch from magnetic influence, we put the inner works in a soft iron casing that absorbs the magnetic force and shields the balance wheel. In other words within the soft iron casing we have a space free from the outside magnetic pull - we have a differential of gravity forces.

A gravity absorber or shield would do the same for the anti-gravity spaceship. The shielded interior would be free from the earth's gravity attraction. The inner structure,

equipment and crew would be weightless in relation to the earth. Thus, we would have a differential of gravity forces and our ship would take off instantly like a super-balloon.

For ease of calculation, suppose we take our G-ship to the equator where the rotational speed of the earth is about 1,000 mph. With our anti-gravity shield completely shut, the G-ship would be hurled into space just as a particle of mud shoots off a spinning tire. We would scoot along a more or less straight line unless we had some way of controlling direction and speed.

The weightlessness of the G-ship could be easily controlled by letting some of the earth's gravity force act upon the ship's interior. An arrangement of shutters like venetian blinds would do the trick. To control our direction, we would need thrust. A rocket would limit us to the amount of fuel, so let's try something else.

We could have an ion rocket proposed by Dr. Ernst Stuhlinger or another similar nuclear rocket where sub-atomic particles are accelerated by a powerful electromagnetic gun and ejected into space. We could also utilize electromagnetic repulsion.

We know that two like magnets repel each other, just as under certain conditions an electromagnetic field repels the so-called diamagnetic metals. Take a flat aluminum ring, put it over a strong electromagnet and switch on the current. The disk will fly off the solenoid with quite a speed.

Starting with this principle of diamagnetic repulsion, a group of Canadian scientists of Project Magnet proposes to harness the magnetic fields of the earth and other celestial bodies for propulsion of the G-ship.

The earth's magnetic field is too weak to repel or propel a G-ship made of ordinary metal. However, current studies in the nature of magnetism point to a possible solution. Scientists believe that the answer lies in the structure of atoms.

By rearranging the atomic structure we could greatly increase the diamagnetic properties of the G-ship and make it travel along the magnetic lines of force like the aluminum ring shooting off the solenoid.

According to Einstein's theories, there is no end to the electromagnetic and gravitational fields of the planets and stars.

Those fields intertwine in a most complex pattern but they are ever present. Proper selection of the fields and the controlled exposure to their forces would let us navigate our G-ship in space as well as within the earth's boundaries. And the use of electromagnetic propulsion would eliminate the problem of fuel.

Now, let's take a closer look at the G-ship. Its spherical shape is dictated by the internal pressurization necessary for high altitude and space travel. From the viewpoint of engineering, a sphere is ideal for coping with the pressure differential. Also, it gives the maximum volume for its dimensions. An interior artificial gravity ring would solve the problems of living in a weightless void.

The anti-gravity shield would completely conceal the crew and passenger compartment. This would eliminate visual observation. However, even our present radar and TV would give the crew excellent electronic vision.

Apart from the cabin, there would be an engine room for the anti-gravity motor and the auxiliary power to run the electronic apparatus. Since the ship would take off and

land in the atmosphere, there would be two problems to overcome - the heat caused by air friction and the question of air drag of the spherical shape.

To take the singe out of the friction heat, Canadian scientists headed by Wilbur B. Smith contemplate an ingenious electromagnetic device. Switched on before takeoff, the device would attract and hold fast a large portion of air around the ship.

This captured "boundary cushion" would move with the ship. Therefore the air friction would take place at a distance from the ship's structure and the heat would be dissipated before it could warm up the ship's anti-gravity shield. The mass of captive air would be shaped into the most advantageous aerodynamic form. A tear-drop for moderate speeds, a sharp-ended spindle for supersonics and a concave, cup-like shape for aiding deceleration for landing.

Even for space travel, the stores and provisions would be small. Once outside the earth's atmosphere, the G-ship would be capable of traveling at near the speed of light roughly 600,000,000 miles per hour.

At that speed, a 322,000,000 mile round-trip to Venus would take about 30 minutes!

Make no mistake about it, anti-gravity motors and G-ships are coming. Remember, a year before the Wright brothers took off at Kitty Hawk some of our top scientists "proved" that a heavier-than- air craft could not possibly fly.

And in 1935 the British Air Ministry nixed Frank Whittle's jet engine as "interesting but not practical."

But the best answer to the disbelievers is that some of these anti-gravity ideas are already on the drawing boards of the United States aircraft industry. With their brain power and technological know- how, our engineers will soon send Newton's apple back up where it came from!

(COMMENTARY: What happened to all of this research by aircraft companies? I haven't seen an anti-G Boeing airliner at my local airport lately)

"CONQUEST OF GRAVITY AIM OF TOP SCIENTISTS IN U. S."

Source: NEW YORK HERALD-TRIBUNE: Sunday, November 20, 1955 pp. 1 & 36

"ANTI-GRAVITY RESEARCH - Dr. Charles T. Dozier, left, senior research engineer and guided missiles expert of the Convair Division of General Dynamics Corp., conducting a research experiment toward control of gravity with Martin Kaplan, Convair Senior electronics engineer."

"IN CHARGE - George S. Trimble jr, vice-president in charge of advanced design planning of Martin Aircraft Corp., is organizing a new research institute for advanced study to push a program of theoretical research on gravitational effect"

"CHANGES FAR BEYOND THE ATOM ARE THE PRIZE"

(Revolution in Power, Air, Transit Is Seen)

This is the first of a series on new pure and applied research into the mysteries of gravity and efforts to devise ways to counteract it. Written by Ansel E. Talbert, military and aviation editor, N.Y.H.T.

The initial steps of an almost incredible program to solve the secret of gravity and universal gravitation are being taken today in many of America's top scientific laborato-

ries and research centres. A number of major, long-established companies in the United States aircraft and electronics industries also are involved in gravity research. Scientists, in general, bracket gravity with life itself as the greatest unsolved mystery in the Universe. But there are increasing numbers who feel that there must be a physical mechanism for its propagation which can be discovered and controlled.

Should this mystery be solved it would bring about a greater revolution in power, transportation and many other fields than even the discovery of atomic power. The influence of such a discovery would be of tremendous import in the field of aircraft design where the problem of fighting gravity's effects has always been basic.

A FANTASTIC POSSIBILITY

One almost fantastic possibility is that if gravity can be understood scientifically and negated or neutralized in some relatively inexpensive manner, it will be possible to build aircraft, earth satellites, and even space ships that will move swiftly into outer space, without strain, beyond the pull of earth's gravity field. They would not have to wrench themselves away through the brute force of powerful rockets and through expenditure of expensive chemical fuels.

Centres where pure research on gravity now is in progress in some form include the Institute for Advanced Study at Princeton, N.J. and also at Princeton University: the University of Indiana's School of Advanced Mathematical Studies and the Purdue University Research Foundation.

A scientific group from the Massachusetts Institute of Technology, which encourages original research in pure and applied science, recently attended a seminar at the Roger Babson Gravity Research Institute of New Boston, N.H., at which Clarence Birdseye, inventor and industrialist, also was present. Mr. Birdseye gave the world its first packaged quick-frozen foods and laid the foundation for todays frozen food Industry: more recently he has become interested in gravitational studies.

A proposal to establish at the University of North Carolina at Chapel Hill, N.C., an 'Institute of Pure Physics' primarily to carry on theoretical research on gravity was approved earlier this month by the University's board of trustees. This had the approval of Dr. Gordon Gray who has since retired as president of the University. Dr. Gray has been Secretary of the Army, Assistant Secretary of Defence, and special assistant to the President of the United States.

FUNDS COLLECTED: Funds to make the institute possible were collected by Agnew H. Bahnson jr., an industrialist of Winston Salem, N.C. The new University of North Carolina administration is now deciding on the institute's scope and personnel. The directorship has been offered to Dr. Bryce S. Dewitt of the Radiation Laboratories at the University of California at Berkeley, who is the author of a Roger Babson prize-winning scientific study entitled, 'New Directions for Research in the Theory of Gravity.'

The same type of scientific disagreement which occurred in connection with the first proposals to build the hydrogen bomb and an artificial earth satellite -now under construction - is in progress over anti-gravity research. Many scientists of repute are sure that gravity can be overcome in comparatively few years if sufficient resources are put behind the project. Others believe it may take a quarter of a century or more.

REFUSE TO PREDICT: Some pure physicists, while backing the general program to try to discover how gravity is propagated, refuse to make predictions of any kind. Aircraft industry firms now participating or actively interested in gravity include Glenn L. Martin Co. of Baltimore, builders of the nation's first giant jet-powered flying boat; Convair of San Diego, designers and builders of the giant B-36 intercontinental bomber and the world's first successful vertical take-off fighter; Bell Aircraft of Buffalo, builders of the first piloted airplane to fly faster than sound and a current jet take-off and landing airplane, and Sikorsky Division of United Aircraft, pioneer helicopter builders.

Lear, Inc., of Santa Monica, one of the world's largest builders of automatic pilots for airplanes; Clarke Electronics of Palm Springs, California, a pioneer in its field, and the Sperry Gyroscope Division of Sperry-Rand Corp., of Great Neck, L.I., which is doing important work on guided missiles and earth satellites, also have scientists investigating the gravity problem.

USE EUROPEAN EXPERT: Martin Aircraft has just put under contract one of Europe's leading theoretical authorities on gravity and electromagnetic fields - Dr. Burkhard Heim of Goettingen University where some of the outstanding discoveries of the century in aerodynamics and physics have been made, and Dr. Pascual Jordan of Hamburg University, Max Planck Medal winner whose recent work called 'Gravity and the Universe' has excited scientific circles throughout the world.

Dr. Heim, now professor of theoretical physics at Goettingen, and who was a member of Germany's Bureau of Standards during World War II, is certain that gravity can be overcome. Dr. Heim lost his eyesight and hearing, and had both arms blown off at the elbow in a World War II rocket explosion. He dictates his theories and mathematical calculations to his wife.

Martin Aircraft, at the suggestion of George S. Trimble, its vice-president in charge of advanced design planning, is building between Washington and Baltimore a new laboratory for the Research Institute for Advanced Study... A theoretical investigation of the implications for future gravity research in the 'United Field Theory' of the late Dr. Albert Einstein is now underway here.

Although financed by Martin, the Institute will have no connection with the day-to-day business of building airplanes. Its general manager is Welcome Bender.

Up to now no scientist or engineer - so far as is known in the scientific circles - has produced the slightest alteration in the magnitude or direction of gravitational 'force' although many cranks and crackpots have claimed to be able to do this with 'perpetual motion machines.'

NO ACCEPTED THEORY: There is no scientific knowledge or generally accepted theory about the speed with which it travels across interplanetary space, making any two material particles or bodies - if free to move - accelerate toward each other. But the current efforts to understand gravity and universal gravitation both at sub-atomic level and at the level of the Universe have the positive backing today of many of America's outstanding physicists.

These include Dr. Edward Teller of the University of California, who received prime credit for developing the hydrogen bomb; Dr. J. Robert Oppenheimer, director of the

Institute for Advanced Study at Princeton; Dr. Freeman J. Dyson, theoretical physicist at the Institute, and Dr. John A. Wheeler, professor of physics at Princeton University who made important contributions to America's first nuclear fission project.

PURE RESEARCH VIEW: It must be stressed that scientists in this group approach the problem only from the standpoint of pure research. They refuse to predict exactly in what directions the search will lead or whether it will be successful beyond broadening human knowledge generally.

Other top-ranking scientific minds being brought to bear today on the gravity problem are those of Dr. Vaclav Hlavaty, of the University of Indiana, who served with Dr. Einstein on the faculty of Charles University in Prague and later taught advanced mathematics at the Sorbonne in Paris; and of Dr. Stanley Deser and Dr. Richard Arnowitt of the Princeton Institute for Advanced Study.

Dr. Hlavaty believes that gravity simply is one aspect of electro-magnetism - the basis of all cosmic forces - and eventually may be controlled like light and radio waves.

HOPE TO FIND KEY: Dr. Deser and Dr. Arnowitt are of the opinion that very recently discovered nuclear and sub-nuclear particles of high energy which are difficult to explain by any present-day theory, may prove to be the key that eventually unlocks the mystery. It is their suggestion that the new particles may prove to be basic gravitational energy which is being converted continually and automatically in an expanding Universe directly into the most useful nuclear and electromagnetic forms.' In a recent scientific paper they point out:

'One of the most hopeful aspects of the problem is that until recently gravitation could be observed but not experimented on in any controlled fashion, while now with the advent in the past two years of the new high-energy accelerators (the Cosmotron and the even more recent Berkeley Bevatron) the new particles which have been linked with the gravitational field can be examined and worked with at will .'

An important job of encouraging both pure and applied gravity research in the United States through annual prizes and seminars as well as, the summarizing of new research for engineers and scientists in industry looking forward to a real 'hardware solution' to the gravity problem is being performed by the Gravity Research Foundation of New Boston, N.H.

This was founded and endorsed by Dr. Roger Babson, economist, who is an alumnus of M.I.T. and a lifelong student of the works of Sir Isaac Newton, discoverer of gravity. Its president is Dr. George Rideout of Boston.

BLACKBOARD MATH - Dr. Vaclav Hlavaty, of the University of Indiana's graduate Institute of Advanced Mathematics, who has stimulated research on gravity control, working on a problem."

"ANTI-GRAVITY AND AVIATION - George S. Trimble jr. vice-president in charge of advanced design planning of Martin Aircraft Corp., left discussing the application of anti-gravitational research to aviation with two Martin scientists, J.D. Pierson, centre, and William B. Yates."

BREAKING THE LAW OF GRAVITY

In 1996, Russian émigré scientist Eugene Podkletnov was about to publish a peer-

reviewed article in the respected British Journal of Physics-D -proving, he claimed, that gravity could be negated. Then a London newspaper publicized his conclusions, and the skeptics had a field day. Everyone knew you couldn't mess with the law of gravity - Einstein himself had said so.

Podkletnov withdrew the article. His university evicted him. He retreated from the public eye.

But the controversy hasn't gone away, as his findings began to be investigated in laboratories around the world. Including one owned by NASA.

Now, as Charles Platt discovers, Eugene Podkletnov is back and unrepentant.

Shortly before dawn on a dismal, rain-drenched winter morning I'm heading out of Helsinki along Highway 3, into the heart of Finland. This obscure nation is an underpopulated wilderness sandwiched like a DMZ between Russia and Sweden, extending all the way up into the Arctic Circle. The sun barely sets here in the summer, while in the winter, it barely rises. I can't imagine why anyone would visit Finland in the dark months, unless motivated by some strange need to go skiing in perpetual twilight ... but my grueling pilgrimage has nothing to do with snow. I've come in search of a singular individual, a reclusive, elusive Russian émigré scientist named Eugene Podkletnov, who claims that he can defy the force of gravity.

Five years ago, while testing a superconducting ceramic disc by rotating it above powerful electromagnets, Podkletnov noticed something extremely strange. Small objects above the disc seemed to lose weight, as if they were being shielded from the pull of Planet Earth. The weight reduction was small - around 2 percent - but nothing like this had ever been observed before. If the shielding effect could be refined and intensified, the implications would be immense. In fact, practical, affordable gravity nullification could change our lives more radically than the invention of the internal combustion engine.

IMAGINE A FUTURE IN WHICH VEHICLES CAN LEVITATE FREELY.

Highways and railroads become obsolete, airplanes no longer need wings, and oceangoing ships can be broken up for scrap. Industries in which large masses have to be transported or supported - from mining to construction -are revolutionized. Citizens gain unprecedented mobility, transcending all geographical and national barriers.

Meanwhile, space travel is now safe, cheap, and fast. Resources can be mined in the asteroid belt and shipped to factories relocated in orbit around Earth, freeing our planet from pollution and greenhouse-gas emissions. Ultimately the old dream of colonizing other worlds may be realized, not just for a handful of highly trained astronauts but for millions of everyday people.

Far-fetched? Indeed. Most physicists laughed at Podkletnov's report. Riley Newman, a professor of physics at UC Irvine who has been involved in gravity research for 20 years, typified the reaction when he commented, "I think it's safe to say gravity shielding is not conceivable." Like many scientists, he felt that Podkletnov must have made a mistake, measuring magnetic fields or air currents instead of genuine weight reduction.

And yet, few of Podkletnov's critics actually bothered to read his description of his work. Their reaction was so dismissive, it almost sounded like prejudice. From their per-

spective he was an outsider, a nonmember of the "gravity establishment." They couldn't believe that a major discovery in physics had been made by such a no-status dilettante fooling around at some obscure lab in Finland.

True, Podkletnov wasn't a physicist - but he did have a doctorate (in materials science) and he knew how to do careful lab work. When he wrote up his results, his papers were accepted for publication in some sober physics journals, and at least one theoretical physicist - an Italian named Giovanni Modanese - became intrigued. Modanese didn't dismiss the whole idea of gravity shielding, because on the subatomic level, we simply don't know how gravity functions. "What we are lacking today," according to Modanese, "is a knowledge of the microscopic or 'quantum' aspects of gravity, comparable to the good microscopic knowledge we have of electromagnetic or nuclear forces. In this sense, the microscopic origin of the gravitational force is still unknown." At the Max Planck Institute in Munich, he developed a theory to explain the shielding phenomenon.

In the United States, scientists affiliated with NASA were thinking along similar lines. They obtained funding to replicate Podkletnov's experiment -but still the skeptics remained cynical and unimpressed. The concept of gravity shielding has an aura of science-fictional weirdness; it sounds like something out of The X-Files. Indeed, Podkletnov's experiment was actually mentioned in an episode of The X-Files, virtually guaranteeing that most scientists wouldn't take it seriously.

Podkletnov now claims that his results have been verified by researchers at two universities - but he won't name these people for fear that they'll be ridiculed and ruined by the gravity establishment. The team at NASA make no secret of their work - but they have no definite results, yet. And so, at this time, the only credentialed scientist claiming to have witnessed gravity modification is Podkletnov himself.

For almost a year I've been wrestling with this story, which is a journalistic night-mare, because nothing can be verified. Podkletnov may have made one of the great breakthroughs of the 20th century, or he may be suffering from a severe case of hubris coupled with wishful thinking. In darker moments I wonder if he even exists; the whole gravity story could be a prank by a bunch of hackers using a fake email address and a Finnish phone number that autoforwards calls to a dorm at MIT.

These thoughts run through my mind as I pull off Highway 3 into a rest area, crack a screw-top bottle of Vichy water, and check my map. It's now an hour after dawn, but the light is still so dim, the scenery outside is all in shades of gray - as if I'm trapped inside a monochrome TV with the brightness control stuck near zero. In Finland in the winter, when the sky is totally choked with clouds, the country becomes one big sensory-deprivation tank.

On the car radio some nameless station plays authentic American bluegrass, except that the lyrics are in Finnish, which is a head-bending experience, the last thing I need right now. Still, having come 5,000 miles I am determined to see this through. In just a few hours I am scheduled to meet Eugene Podkletnov in person, in the town of Tampere, where his gravity-modification experiments took place. I will verify, if nothing else, that he does exist ... assuming of course that I can find Tampere in this drizzle-soaked wilderness of undifferentiated gloom.

Gravity shielding isn't a new idea. H. G. Wells explored its potential for spaceflight almost a century ago in his classic novel The First Men in the Moon, and Wells also foresaw an avalanche of applications on Planet Earth, creating an uneasy conflict between pure science and pure greed. In his novel, a lone mad scientist says he isn't in it for the money; he just wants some recognition, and maybe a prize or two. But then he starts to realize just how much money could be involved. "I suppose," he says thoughtfully, "no one is absolutely averse to enormous wealth."

Eugene Podkletnov must be aware of this - but so far, he has reaped more pain than profit. After publishing a preliminary paper in 1992, he wrote a more thorough paper that was rejected by more than a dozen journals till finally it penetrated the peer-review process at the respected British Journal of Physics-D. This seemed to offer the recognition he was hoping for, yet instead it initiated a career-destroying nightmare.

The trouble started when Robert Matthews, science correspondent to the British Sunday Telegraph, got hold of the story. Matthews, like any journalist, relies on contacts, and he's disarmingly honest about it. "You don't get stories by digging for them," he now says with a laugh. "This isn't like Sherlock Holmes, that's a lot of bollocks. It's like, you hope a little brown envelope turns up in the post, and if it does, you're in luck."

In his case the little brown envelope contained page proofs of Podkletnov's paper, leaked by a man named Ian Sample who worked on the editorial staff of the Journal of Physics-D. Although Podkletnov's paper hadn't been published yet, Sample and Matthews decided to break the story in the Sunday Telegraph, which printed it on September 1, 1996. The first sentence was key: "Scientists in Finland are about to reveal details of the world's first antigravity device."

Antigravity? Podkletnov never used that word; he said he'd found a way to block gravity. Maybe this seemed a trivial distinction, but not to the staid professors at the Institute of Materials Science in the University of Tampere, to whom "antigravity" sounded like something out of a bad Hollywood movie.

The director of the institute promptly denied any involvement and declared that Podkletnov was working entirely on his own initiative. Then the coauthor of Podkletnov's paper claimed that his name had been used without his knowledge - which was highly implausible, but he stuck to his story, presumably because the institute told him to. In the end Podkletnov had to withdraw the paper from publication in the journal, he was abandoned by his friends, and his credibility was impaired.

At this point I obtained Podkletnov's phone number in Tampere and gave him a call. He turned out to speak fluent English but was reluctant to say anything, claiming that irresponsible journalism had ruined his career. I gave him various assurances, faxed samples of my work, made more calls - and finally, on November 10, 1996, he gave me a telephone interview.

He told me how he had made his discovery. "Someone in the laboratory was smoking a pipe," he said, "and the pipe smoke rose in a column above the superconducting disc. So we placed a ball-shaped magnet above the disc, attached to a balance. The balance behaved strangely. We substituted a nonmagnetic material, silicon, and still the balance was very strange. We found that any object above the disc lost some of its weight,

and we found that if we rotated the disc, the effect was increased."

I had no way to evaluate the truth of this, so I contacted John Cramer, a physicist who was familiar with the story. "I don't believe he has discovered a shield for gravity," Cramer told me, insisting that huge amounts of energy would be required.

I checked back with Podkletnov. "We do not need a lot of energy," he said, sounding irritable, as if I were wasting his time with dumb, obvious questions. "We don't absorb the energy of the gravitational field. We may be controlling it, as a transistor controls the flow of electricity. No law of physics is broken. I am not one crazy guy in a lab, we had a team of six or seven, all good scientists."

So who should I believe? Maybe if I met Podkletnov in person, I could assess his plausibility - but a few days later, he told me this was impossible. In fact, he said, he had decided that he wanted no further publicity of any kind.

This put me in an impossible position. Podkletnov had talked to me, originally, because I pledged to publish nothing about him without his consent. Now that he had withdrawn his consent, I simply had to honor my pledge. Temporarily at least, I abandoned the story.

Months passed. Once in a while I sent email to the Italian physicist, Giovanni Modanese, who seemed to know where Podkletnov was hiding, but Modanese just confirmed that the reclusive Russian still wouldn't talk. Finally, by chance, I read a Usenet message from a 34-year-old software developer in Oregon named Pete Skeggs, who turned out to be a pivotal figure in a newly emergent Net phenomenon: the gravity-enthusiast underground.

Skeggs had a BS in electrical engineering, a BS in computer science, and he loved to tinker with things. In his own little workshop he had tried to replicate Podkletnov's experiment using some homemade electromagnets and a 1-inch superconductor that he ordered from the Edmund Scientific mail-order catalog for US\$24.95. He didn't get any results, but decided to start a gravity-modification Web page. Soon it was a huge repository of abstracts, speculation, and references, along with reports of work by other amateurs, some of whom claimed amazing results. A man named John Schnurer, at Antioch College, Ohio, said that his homemade setup could reduce the force of gravity by 2 percent on a reliable, repeatable basis.

I sent email to Schnurer; he replied enigmatically, refusing to divulge his home or office phone numbers and insisting that I must page him, after which he would call me back. On September 17, 1997, he returned one of my calls.

Aged 45, Schnurer said he had a "strong science background," though he admitted he had no college degree. He claimed to have coauthored "more than 12 peer-reviewed papers" and had spent "more than nine years providing tech support for Armstrong Aerospace Medical Research Labs at Wright-Patterson Air Force Base," where they had been trying to find ways for pilots to control airplanes via brainwave sensors. "We had a flight simulator," Schnurer said. "You could sit in it and make it roll with your brainwaves." However, he'd been laid off in 1995 because of budget cuts, and he was frank about his current problems. "I don't have any money," he said. "Most of my equipment I built myself, or borrowed, or resurrected." Still, he claimed that his redesigned version of

Podkletnov's setup was working on a routine basis and could be used onboard Earth satellites to make small orbital corrections.

Was Schnurer for real? He agreed that I could visit him, so I arranged for Wired photographer Norman Mauskopf to meet me in Ohio. A couple of days before my trip I contacted Schnurer just to check that there were no snags, and he assured me his apparatus was still up and running. "I have enough liquid nitrogen for one run, maybe two," he said.

This made me suspicious. Two demos would be just enough to show some results, while preventing a more thorough investigation. I sent email asking Schnurer to obtain more liquid nitrogen. I even told him that if he didn't have enough money, I'd pay for it myself.

Two hours later, he called me. "Can you wire me the cash via Western Union?" he said. "I need \$150."

Well, I'd been dumb enough to make the offer, and I was determined to witness a thorough trial; so I sent the money. Two days later I was in a rented car with Norman Mauskopf, driving across the flat farmland of Ohio to Antioch College, just south of Dayton.

We found Schnurer in a fine old red-brick residence with white-painted casement windows and a big front porch. This turned out not to be his home; the place had been divided into offices. Schnurer's workshop was in a long, thin sunroom where a white-painted wooden bench left barely enough space for people to squeeze past each other. The bench was strewn with components, tools, computer circuit boards, books, and looseleaf binders. At the far end stood the Gravity Modification Machine.

A long wooden rod was pivoted on a nail, supported by a wooden yoke glued to a block of plywood. A piece of string dangled from one end of the rod, tied around a lump of scrap metal. At the other end a tangle of fine wires ran down to some coils underneath a 1-inch black disc - a superconductor that had been donated by a local manufacturer, thus saving Schnurer the \$24.95 charged by Edmund Scientific. When I asked why he had to economize so stringently, he muttered something about his family not fully sharing his enthusiasm for gravity research.

The wires from the electromagnets snaked back to a 12-volt power supply, via a "switching system" consisting of bare copper contacts that had to be maneuvered by hand. "You can't photograph that," Schnurer said firmly. "That's an integral part of my patent application."

I stared at his apparatus in dismay. Even straining my creative powers to the limit, clearly there was no way to portray this as cutting-edge science. The components looked as if they'd been salvaged from a dumpster.

Schnurer, however, was eager to begin. He showed me his "target mass" (a bundle of seven glass rods), which he placed ceremoniously on a borrowed digital scale. He noted the readout: 27 grams. Then he picked up a small tank of liquid nitrogen - my liquid nitrogen, I realized, feeling a bit pissed about it - and he poured a portion into a Dewar flask. The liquid hissed like oil in a hot frying pan as it boiled violently at room temperature. We waited a few minutes for the clouds of white vapor to die down.

"Now!" said Schnurer. He lowered the electromagnets, disc, and target mass into the Dewar flask, to cool the disc so that its electrical resistance would diminish to zero. Then he placed the lump of scrap metal on the scale, to read the difference in weight between it and the assembly in the Dewar flask. The numbers flickered wildly, responding to thermal currents in the liquid, air currents in the room, vibration from a truck passing on the road a couple hundred feet away, and a dozen other random factors. Still, a substantial weight reduction would make these small fluctuations irrelevant. "We'll call the weight 20.68," Schnurer said, scribbling the figure.

He went to his copper contacts and started manipulating them to send pulses to the electromagnets. I watched the scale - and suddenly felt as if reality was warping around me, because the numbers began changing. According to the scale, the target mass was getting lighter.

"Write down the peak value!" Schnurer alerted me.

The numbers were still jumping, but I averaged them as well as I could. Schnurer grabbed his scrap of paper, did a subtraction, divided the result by the original weight of the target mass, and got his answer: here in this funky little workshop, the force of gravity had just been reduced by 2 percent.

"Let me try that," I said, pointing to the copper contacts. Schnurer stepped aside, looking somewhat reluctant; but when I did what he had done, the results were the same.

"Maybe you should take a look over here," Norman Mauskopf remarked, nodding toward the superconductor where it dangled in the liquid nitrogen. I realized with chagrin that I had been totally hypnotized by the red LEDs on the scale. When I turned my attention to the flask, I saw what I should have seen before: electricity flowing through the submerged coils was creating heat that made the frigid liquid boil. Just as eggs bounce around when you boil them in a saucepan, the superconductor and its target mass were being lifted by bubbles. We weren't measuring gravity reduction, here, we were conducting an experiment in cryogenic cookery!

I pointed this out to Schnurer. He looked annoyed - then indifferent, and I realized that there was still no doubt in his mind, because he was a True Believer. He knew he was modifying gravity. "So we'll lift it out of the liquid nitrogen," he said. "It'll stay cold enough for the effect to work for 15 or 30 seconds. And you'll see, it will still get lighter."

We tried it, and sure enough the assembly lost weight. But it had dragged some liquid nitrogen with it from the flask, and was steaming madly. This was now the source of weight loss, just as damp clothes become lighter as they dry on a washing line.

"John, you're not measuring gravity fluctuations," I told him. "You're measuring the effects of boiling and evaporation."

Schnurer was now visibly agitated. He wanted to run the experiment again. And again. He varied the target mass, scribbled more numbers on odd scraps of paper - after a while there were so many scraps, he lost track of which was which. For several hours he tried every conceivable configuration.

While waiting patiently to see how long it might take him to admit defeat, I noticed a page from Business Week lying on his workbench. It was an article about gravity modification, mentioning Schnurer's work, illustrated with a photograph taken right here in

this cramped little hobby-den - although false color and a wide-angle lens made the place look like a futuristic laboratory. Then I scanned the text and realized that this writer possessed the creative powers that I so sadly lacked. He seemed cautious and objective yet made Schnurer sound like a fully qualified scientist, even identifying him as "director of physics engineering at Antioch College."

I queried Schnurer about this. Gruffly he told me that he has never been employed by Antioch University; his workshop just happens to be near Antioch. With several partners, he runs a very small company named Physics Engineering, of which he's a director. Only in this sense can he be termed a director of Physics Engineering.

Around 9 p.m., we called it quits. I didn't enjoy being a heartless skeptic, questioning John Schnurer's credentials and debunking his dreams of refuting Einstein. I just wanted to go home.

Back in New York, three pieces of email from John Schnurer were already waiting for me. With urgent sincerity he claimed there had been a series of unfortunate errors. The superconductor had become degraded! The results I'd witnessed were invalid! He begged me to return to Ohio right away, to witness a whole new series of experiments with a brand-new disc.

Well - thanks, but no thanks. I didn't relish another session of Skeptic versus True Believer. I felt sure that it wouldn't work out any better the second time around, and it wouldn't make either of us very happy. Instead, I followed up another reference from the indefatigable Pete Skeggs, and learned the strange history of NASA's involvement in gravity-shielding research.

In 1990 a senior scientist at the University of Alabama named Douglas Torr started writing papers with a Chinese woman physicist named Ning Li, predicting that superconductors could affect the force of gravity. This was before Eugene Podkletnov made his observations in Tampere, so naturally Li and Torr were delighted when they heard that Podkletnov had accidentally validated their predictions. Their university enjoyed a good working relationship with the Marshall Spaceflight Center in Huntsville, where they eventually persuaded NASA to start a serious long-term investigation. Ning Li remained involved, while Douglas Torr relocated to South Carolina.

Skeggs now forwarded to me an amazing document suggesting that Torr had ventured into even stranger territory. The document was Antigravity News and Space Drive Technology, an amateur zine that looked like a 1970s counterculture manifesto, generated on an old daisywheel printer, pasted into pages, photocopied, and stapled down the left edge. This science-oriented samizdat was a hopeless muddle of wacky ideas and grandiose claims, but on its back cover it reproduced an announcement from the Office of Technology Transfer at the University of South Carolina.

Incredibly, this text described a "gravity generator" that would create a force beam in any desired direction. The announcement concluded: "University seeks licensee and/ or joint development. USC ID number: 96140." At the bottom of the page was a phone number for William F. Littlejohn at the Office of Technology Transfer, so I called it, and reached an assistant named Frances Jones. Sounding not very happy, she confirmed that the announcement was genuine. "But Mr. Littlejohn says it was presented prematurely, it

got wider distribution than we intended, and we're - still working on the technology, and would prefer not to receive any publicity."

She refused to say if Douglas Torr was involved, but on the university's Web site I found an Annual Report to the Faculty Senate which listed his name on a patent application for the gravity generator. This was totally bizarre; a respected university supposedly looking for commercial partners to develop a gadget straight out of a 1950s science-fiction novel. Surely, nothing could be weirder than this - but no, there was more in store. Through my physicist friend John Cramer I learned of a scientist named James Woodward who claimed to have found a way to reduce the mass of objects.

"Mass" doesn't mean the same thing as "weight." You'd weigh less on the moon than on the Earth, because weight depends on the force of gravity. Mass, on the other hand, is an innate property of matter; it exists even when an object is in free fall. Nevertheless, Woodward had written a paper claiming that he could adjust the mass of an object (Foundations of Physics Letters, vol. 3, no. 5, 1990), and he even managed to get a US patent for his device (number 5,280,864, issued January 25, 1994).

I called him at his office at Cal State Fullerton, where he's been affiliated for 25 years and is currently an adjunct professor of physics. He turned out to be a jovial, amiable man who was more than willing to talk on the record, probably because his work has remained so obscure, no one has had a chance to ridicule it yet.

The equipment he uses is relatively simple, which is just as well, since he's had to pay for a lot of it himself. If you want to reduce the mass of an object in the privacy of your own basement workshop, here's how it's done: Obtain a high tech ceramic capacitor (a standard electronic item) and attach it to the speaker terminals on a stereo amplifier. Feed in a steady tone (perhaps from one of those stereo-test CDs) while using some kind of electromechanical apparatus (maybe the guts from an old loudspeaker) to vibrate the capacitor up and down. According to Woodward, the capacitor's mass will vary at twice the frequency of the signal, so you will need a circuit called a frequency doubler to drive your vibrator at the correct rate. If the vibrator lifts the capacitor while it's momentarily lighter and drops it while it's heavier, you achieve an average mass reduction - which sounds as if you're getting something for nothing, except that Woodward believes that in some mysterious fashion you are actually stealing the energy from the rest of the universe.

I asked him why no one had ever noticed that the weight of capacitors varies in rhythm with their energy level. "Well," he said, "people don't normally go around weighing capacitors."

He claimed that so far he's measured a reduction of up to 150 milligrams; just a fraction of an ounce. Still, practical applications could be developed. "If someone decided to put substantial amounts of money into this, you could have something within three to five years. For spacecraft, all you'd need would be big solar arrays instead of rocket fuel."

I asked him if there was any chance that his discovery might turn out to be bogus, like cold fusion. "Of course!" he said, laughing cheerfully. "I have biweekly paranoia attacks, and then I try something else to see if I can make this effect go away. But, it won't

go away."

I asked his opinion of the team at NASA. "Serious and competent, sensible folks," he said - though he seemed to find gravity shielding a bit implausible, even compared with mass reduction.

Clearly, it was time to call NASA. I contacted David Noever, a theoretical physicist and former Rhodes scholar who started working with NASA in 1987 after getting a PhD at Oxford University, England. He seemed to be the key figure trying to replicate Podkletnov's work, and he invited me to see for myself.

The Marshall Spaceflight Center is a box-shaped 10-story office building with a 1960s pedigree. The closer I came, the shabbier it looked; when I walked up the front steps, I noticed cracks between the faded gray panels of its façade. Alas, poor NASA! Formerly the favorite child of federal legislators, now nickel-and-dimed half to death. Upstairs I found utilitarian government-style offices with cheesy rubberized floor tiles, ancient gray steel desks, and file cabinets that seemed to have been repainted by hand. The place was almost Soviet in its austerity.

I entered the office of Whitt Brantley, chief of the Advanced Concepts Office, and found five people waiting around a wood-grain formica conference table. David Noever was one of them: a tall, brooding figure with intense eyes and dark brown hair in need of a trim. Behind a desk at the far end sat Brantley, a genial Santa Claus who joined NASA back in 1963, when he worked on von Braun's wildly ambitious scheme to put men on Mars, before the Apollo program had even test-launched its first capsule. Even this seemed relatively normal, though, compared with gravity shielding. I asked him how he had raised the money for such a wacky idea.

"The first research proposal I wrote didn't have the word 'gravity' in it anywhere," he said with a grin. "Then the Sunday Telegraph article came out, and our administrator, Goldin, was going to a Star Trek convention where the Trekkies might ask him about gravity modification, so we decided to tell him what was going on. He backed up a step or two, then said he thought NASA should spend a little money on work like this. So, we wiped the sweat off our brows and continued."

Tony Robertson, another member of the team, leaned forward, a lot younger and more earnest that Brantley. "The way I see it," he said, "NASA has a responsibility to overcome gravity."

"Right," said Brantley. "We've been building antigravity machines since day one - it's just that they're not as efficient as we'd like them to be."

Everyone chuckled at that.

"It's true we're pushing the edge," Brantley went on. "But the only way to guarantee you don't win the lottery is, don't buy a ticket."

I turned to David Noever, who looked tense and restless, as if he'd rather be in his laboratory. I asked how he felt about amateur gravity enthusiasts. "Well, we went to visit John Schnurer," he said. "But he wouldn't let us in. We had to meet him outside on a park bench. We also invited Podkletnov to come to Huntsville, back in January 1997. We said we'd pay his way, but he said he didn't see any value in it."

"It's not uncommon for people to distrust NASA," said Brantley, "because we're part

of the government. They think even if we did discover something, we'd cover it up. You know, Roswell and all that -"

By this time, Noever was definitely ready to go. "Let's show you the lab," he said.

He led the way outside to an enclave of austere, ugly concrete buildings that looked as if they might have been left over from World War II. Inside, past massive machinery for pressing ceramic discs, I entered a lab about 20 feet square, with one wall of windows, fluorescent ceiling panels, big white cylinders of liquid helium and liquid nitrogen, and heavy-duty rack-mounted power supplies in rectangular metal cabinets.

Noever explained that the team is trying several different approaches. He showed an assortment of 1-inch superconducting discs, made from every conceivable mix of ingredients. He demonstrated a gravimeter: a beige-painted metal unit the size of a car battery. Across the room was a tall insulated tank about a foot in diameter, with a huge coil wrapped around the base capable of taking 800 amps, though Noever said that the current would create enough heat to melt the floor. The tank had been designed to contain a 6-inch disc rotating in liquid helium, with the gravimeter suspended above.

Meanwhile, the team was still struggling to fabricate 12-inch discs, which tend to fracture into pieces during pressing and a subsequent baking process. "This is what Podkletnov says is the heart of the matter," said Noever, "learning to make the discs. He said it could take us one or two years. He did reveal the composition -"

But not the step-by-step method for production?

Noever laughed sourly. "Of course not. At least, he hasn't told us. He's very adamant about not talking to people about some aspects of this work."

Already, though, Noever said he had achieved some possible results with smaller discs. He showed one graph that suggested significant changes in gravitational force. "We only saw this a couple of times. We have to see it 100 times before we'll allow ourselves to reach any conclusions. And then we'll get the Bureau of Standards in here to check it out, and then, maybe, we'll publish a paper."

Noever suggested that gravity may have a natural frequency, far higher than X rays or microwaves, which would explain why it penetrates all known materials. A superconducting disc could resonate and downshift the frequency to a lower level where it could be blocked by normal matter. "But this is all very speculative," he cautioned, adding that it's just one of three theories that could explain gravity shielding.

Ron Koczor, project manager of the team, had been sitting over at one side of the lab looking amiable but diffident. Koczor's background is in infrared and visible optics; his last project was a space shuttle experiment to measure winds in Earth's atmosphere using specially designed lasers. By comparison, gravity shielding research is a labyrinth of uncertainties.

"In this kind of research you go from depression to elation, sometimes just from hour to hour," said Koczor. "But if this is real, it's going to change civilization. The payoff boggles the mind. Theories about gravitational force today are probably comparable to knowledge of electromagnetism a century ago. If you think what electricity has done for us since then, you see what controlling gravity might do for us in the future."

Before going to Huntsville I had sent yet another message to Giovanni Modanese,

asking again if Eugene Podkletnov was willing to talk to me. Naturally I didn't expect a positive reply - but to my amazement Modanese wrote back saying that Podkletnov had returned to Finland and was now ready to cooperate.

I called Podkletnov right away. Yes, he said, it was true; he would talk. I could meet him in person.

Four days later I was boarding a Finnair MD-11. Nine hours after that I found myself in Helsinki Airport, waiting for my baggage to come off a carousel. About 200 Finns were waiting with me, looking stoic and withdrawn, like guests at a funeral. The only sound was the clanking of the conveyor belt, and I remembered a phrase from the Lonely Planet travel guide that I'd read on the plane: "A happy, talkative Finn does not inspire admiration among fellow Finns, but rather animosity, jealousy, or hostility. Being silent is the way to go."

Outside, it was almost noon but looked like dusk. "Winter is the most hopeless time, when many people are depressed," my guidebook warned me. In fact, back in the early 1970s a Finnish scientist named Erkki Vaisanen discovered SAD - seasonal affective disorder, the type of depression caused by lack of sunlight. He was tipped off by the rash of suicides that sweeps through Finland every September. I began to wonder why Podkletnov had chosen to relocate here.

I drove to a grim little industrial park (where all the buildings were painted gray, as if to emulate the weather) and checked in at a Holiday Inn that looked like a small electronics factory. After exiting an elevator paneled in stainless steel, I struggled to open a massive metal fire door, walked past a sauna, and unlocked my tiny Euro-style room. Shortly before sunset, around 4:30 in the afternoon, I did some serious channel surfing in a dutiful attempt to locate and comprehend the core, the quintessence of Finland.

The first thing I found was an ancient episode of hey-hey-we're-the-Monkees resuscitated from some godforsaken video archive and dubbed in French, "parce que nous monkee around." Then there was a 1990 Hong Kong action movie, dubbed in German, subtitled in Finnish - maybe Swedish, it was hard to tell.

Finland's identity was proving elusive, and I could think of at least one reason why. A key factor could be the 1,300-kilometer frontier that the country shares with Russia. How did the Finns cope with the ominous presence of that notoriously expansionist superpower during the fearful decades of the Cold War? They suppressed their separate national identity. They made their political system close enough to communism to placate the Politburo, and they traded actively, selling the Russians cheap wood products and electronic devices such as telephones. Thus, they made themselves far too useful to be worth invading.

Interestingly, the policy of appeasement paid dividends. Finland enjoys steady growth, with inflation down near 1 percent. It exports telecommunications products to the rest of Europe and steals shipbuilding contracts from the Japanese. Its infrastructure looks well maintained. Its people seem healthy. Thus, Eugene Podkletnov's presence here is not such a mystery after all. Compared with Russia, Finland is a land of opportunity.

And so, finally: Tampere.

As I drive in on Highway 3, the first thing I see is a huge smokestack and a rail yard with mercury-vapor lights on steel towers. Another smokestack stands in the distance, trailing a white plume. Although the population is under 200,000, this is still the second-largest city in Finland, and a haven for industry.

Opposite the railroad I find the Hotel Arctia, where Podkletnov has agreed to meet, since he feels that his "modest apartment building" is not suitable.

In a slightly rundown lobby paneled in varnished plywood, I sit on a couch upholstered in drab gray wrinkled fabric and wait as patiently as I can, very conscious that I have come 5,000 miles on this far-fetched, far-flung pilgrimage - at which point a man in a navy blue pinstriped business suit walks into the lobby.

This is Eugene Podkletnov.

He looks strangely similar to NASA scientist David Noever, with sharp features and a restless intensity. Close up, though, his face shows a poignant mix of emotions. His mouth twists quixotically at the corners, as if, at any moment, he may display some unexpected response - pathos, laughter, or resignation.

He sits beside me on the rumpled gray couch, and I ask why he decided to talk to me after almost a year of evasion. "You seem sincere," he says, choosing his words cautiously, "and you are polite, and -" He smiles faintly. "You are very persistent."

But he's not interested in small talk. He pulls out a wad of papers and starts a long monolog.

First, he tells me, his work has been replicated by students in Sheffield, England, and scientists in Toronto, Canada. No, he won't give me their names. He consulted by phone with the Sheffield students, and he went in person to Canada, where he stayed for several weeks. "If people follow my experiments exactly," he says, "they succeed. But if they want to follow their own way -" He shrugs. "I try to cheer them up, let them do it, they may find things that I missed." He sounds skeptical - sarcastic, even - and I think he's referring to the NASA team. I wonder if there's a trace of Russian jealousy, here; a suspicion that well-funded Americans will stamp "NASA" on the side of the first fully functional grav-modifying flying machine, at which point everyone will forget about Eugene Podkletnov.

He claims, though, he's happy to share the glory. "What we should do is combine our efforts and organize the Institute for Gravity Research. My aim in life is not to get money, not to become famous. I have 30 publications in materials science, and 10 patents, but -" His mouth twists with bittersweet humor. "Russian people are never rich unless they are criminals. I don't dream about big money. I just want a normal existence, working for the Institute for Gravity Research. That is my dream."

He speaks rapidly and shows no hesitation, not the slightest sign of doubt. I get him to stop and back up a little, to tell me about his history.

He says that his father was a materials scientist, while his mother had a PhD in medicine - just as he, now, is a materials scientist with a wife who is studying medicine. "My father was born in 1896, he spoke six languages freely, he became a professor at Saint Petersburg, we had the atmosphere of scientific research at home all the time. I was brought up surrounded by adults, spent very little time playing with friends in school,

and even now I feel different from colleagues my own age. My father had several inventions in his life, but at that time the Russians asked him like this: 'Does this method exist in the United States?' My father answered no, so they said, 'Then this must be entire nonsense.'" Again Podkletnov gives me an ambiguous smile, tainted with bitterness. "Finally when he got a patent in the United States and Japan, then they gave him a patent in Russia."

Eugene graduated with a master's degree from the University of Chemical Technology, Mendeleyev Institute, in Moscow; then spent 15 years at the Institute for High Temperatures in the Russian Academy of Sciences. In 1988 Tampere University's Institute of Technology invited him to pursue a PhD in the manufacture of superconductors, and after he obtained his doctorate, he continued working there - until the Sunday Telegraph news item appeared in 1996. Suddenly he was abandoned by his friends, unemployed, and fighting the scientific establishment much as his father had fought with the Russian government, except that in his case the stakes were higher, because he believed he had made one of the major discoveries of the 20th century.

Feeling beaten down and alienated, Podkletnov says he gave up in 1997 and drove the 1,400 kilometers back to Moscow, leaving his family in Tampere. But Moscow was not a good place for a scientist to be. In the 1980s he had been able to borrow equipment freely from other scientists; in 1997, when he asked for something they would say, "How much can you pay me?"

"Russians claim they are happy now because they have freedom," Podkletnov tells me, "but they are not happy, and they are not free. If you criticize the government, you may still go to jail. If you call an ambulance, it does not come. If you call the police, they do not come. Even criminals complain that they were better off under communism. College professors are trying to live on \$200 a month in a city where prices are almost as high as in New York, and salary payments are delayed by six months. So - I returned here. I have a job, now, in a local company, as a materials scientist. It only uses perhaps 5 percent of my abilities, but -" He shrugs.

He insists that he isn't embittered. "It is good for a person to be unsatisfied in some way," he says. "You should be happy in family life but not satisfied in your surroundings. This is a source of progress. We have a proverb in Russia: The harder they beat us, the stronger we become." He gives me his twisted smile. "The only problem is, maybe they beat me so much, I never have a chance to use the strength."

I ask how people at his laboratory would characterize him.

"They say always that I am too serious. You understand, here today, I am trying to speak with humor to make your job easier. But in general I am a very determined person, very precise in everything. I don't smile when I am working. When I work, I work."

I ask him what happened to his equipment at Tampere University.

"Part of it is still there, but they don't work with superconductors any longer, and I am not allowed to come to the institute. But still, I can show you the outside of the building."

We walk out into the dark gray afternoon. "Now you are going to be a very brave person," says Podkletnov, "to ride in a Russian car." He unlocks a maroon Lada, which

looks like a cheap version of an old Volvo. With another key he removes a metal clamp linking the clutch and brake pedals - a low tech security device.

But I've been told that Finland has a low crime rate. "Yes," Podkletnov agrees, "this is true. Still, there may be Russian immigrants around."

I can't tell if he's serious or joking.

The car's seat backs are almost vertical, enforcing a rigid military posture. We drive out to the university campus, which is uncompromisingly modern - and of course, the buildings are all in shades of gray.

Back in the hotel lobby Podkletnov shows me detailed diagrams of the experimental equipment that he used. "We measured the weight in every way," he says, adamantly denying that air currents or magnetism could have caused spurious readings. "We used metal shielding, we used nonmagnetic targets, we enclosed the target in a vacuum - we were very thorough."

He claims that he placed a mercury manometer (similar to a barometer) over the superconducting disc and recorded a 4-mm reduction in air pressure, because the air itself had been reduced in weight. Then he took the manometer upstairs to the lab above his and found exactly the same result -as if his equipment were generating an invisible column of low gravity extending upward indefinitely into space, exactly as H. G. Wells described it almost a century ago.

At NASA, David Noever feels that gravity reduction should diminish with distance. Podkletnov, though, has proved to his own satisfaction that the effect has no limit; and if he's right, a 2 percent weight reduction in all the air above a vehicle equipped with gravity shielding could enable it to levitate, buoyed up by the heavier air below. "I'm practically sure," Podkletnov says, "that within 10 years, this will be done." He gives me a meaningful look. "If not by NASA, then by Russia."

But wait; there's more. He has news that hasn't been reported elsewhere. Despite the hardships in Moscow, during the past year he says he conducted research at an unnamed "chemical scientific research center" where he built a device that reflects gravity. Supposedly it's based around a Van de Graaff generator - a high-voltage machine dating back to the earliest days of electrical research. "Normally there are two spheres," he explains, "and a spark jumps between them. Now imagine the spheres are flat surfaces, superconductors, one of them a coil or O-ring. Under specific conditions, applying resonating fields and composite superconducting coatings, we can organize the energy discharge in such a way that it goes through the center of the electrode, accompanied by gravitation phenomena - reflecting gravitational waves that spread through the walls and hit objects on the floors below, knocking them over."

And this, too, can have practical applications?

"The second generation of flying machines will reflect gravity waves and will be small, light, and fast, like UFOs. I have achieved impulse reflection; now the task is to make it work continuously."

He sounds completely sober, serious, matter-of-fact.

If he really wants knowledge to be freely shared, why hasn't he written more about this? And why hasn't he been more open with the people at NASA?

"I'm a serious person. If someone wants serious work, I can provide this. If I was to relocate in the United States, I would need five or six people and two years in a university or well-equipped technical laboratory. I guarantee, if I am invited, I can reproduce everything. But I am not selling my experiment piece by piece. If your readers are serious, they will be able to find me."

So here's a unique opportunity for the venture capitalists out there. Track down the elusive Eugene Podkletnov, make him an offer he can't refuse, and help to free humanity from its pedestrian existence at the bottom of a gravity well.

Does Podkletnov really believe that this will come to pass? He seems to. Does he see himself playing a central role? "I am not a very religious person," he tells me. "But I do believe in God, and of course there is a soul, you can feel it." He pauses, trying to convey his convictions. "Most of all," he says, "like all Russians, I have a sense of destiny. This is a secret of the Russian soul that can't be explained to foreigners. Even Russian people can't understand it. But - we feel it."

At the end of our meeting he strides out of the hotel lobby, as brisk and purposeful as an ambitious businessman, looking younger than his 43 years. I'm impressed by his intense focus, his strict attention to facts and details, and his sincerity. I wonder, though, if a vague sense of destiny is really enough to get him where he wants to go. The history of science is littered with casualties who ventured too far from the mainstream, or seemed a bit - wacky, for their time. Nikola Tesla is a classic example. Even Robert Goddard, the legendary rocketry pioneer, was scorned and forced to work in isolation and poverty for most of his life.

As one physicist told me, "New ideas are always criticized - not because an idea lacks merit, but because it might turn out to be workable, which would threaten the reputations of many people whose opinions conflict with it. Some people may even lose their jobs."

The man who said this is an eminent physicist who started devising equipment to detect gravity waves 30 years ago. Despite his secure tenure and respected status, he still wouldn't let me quote him by name, because he suffered in the past when he promoted radical concepts of his own.

Bob Park is a physics professor at the University of Maryland. When he's pressed to say something about Podkletnov's work, he comments: "Well, we know that we can create shields for other fields, such as electromagnetic fields; so in that sense I suppose that a gravity shield does not violate any physical laws. Still, most scientists would be reluctant to conclude anything publicly from this." Ironically, Park has made a name for himself by debunking "fringe" science in a weekly column for the American Physical Society's Web page. If scientists are reluctant to "conclude anything publicly," it's partly because they know they may be stigmatized by critics such as Park.

Of course, reflexive conservatism isn't the whole story. Many physicists are skeptical about gravity shielding because they believe that it conflicts with Einstein's general theory of relativity. According to George Smoot, a renowned professor of physics at UC Berkeley who collaborated on an essay that won a Gravity Research Foundation award, "If gravity shielding is going to be consistent with Einstein's general theory, you would

need tremendous amounts of mass and energy. It's far beyond the technology we have today."

On the other hand, theories developed by Giovanni Modanese, Ning Li, and Douglas Torr portray a superconductor as a giant "quantum object" which might be exempt from Smoot's criticism, since Einstein's general theory has nothing to say about quantum effects. As Smoot himself admits, "The general theory is widely revered because Einstein wrote it, and it happens to be very beautiful. But the general theory is not entirely compatible with quantum mechanics, and sooner or later it will have to be modified."

He also says that the nonlinear spin of gravity particles - "gravitons" -makes calculations extremely difficult. "When you add a spinning disc," he says, "the equations become impossible to solve."

This means that gravity shielding cannot be disproved mathematically. Even Bob Park, the resident skeptic, shies away from describing it as "impossible," because "there have been things that we thought were impossible, which actually came to pass." Gregory Benford, a professor of physics at UC Irvine who also writes science fiction, echoes this and takes it a step further. "There's nothing impossible about gravity shielding," he says. "It just requires a field theory that we don't have yet. Anyone who says it's inconceivable is suffering from a lack of imagination."

When I first started reading about gravity modification, I was skeptical. Most likely, I thought, Podkletnov's experimental procedures were flawed.

A year later, I'm not so sure. Having questioned him in detail for several hours, I believe that he did his work in a careful, responsible fashion. I'm no longer willing to write him off as an eccentric suffering from wishful thinking. I believe he observed something - although the exact nature of it remains unclear.

And so, frustratingly, there's no conclusive ending to this long, strange story - at least until someone provides independent verification. In the meantime, there's only one thing we can do:

Wait.

Thanks to John Cramer for factual orientation and Robert Becker for theoretical background. Pete Skeggs participated in my visit to NASA and offered extremely generous help.

For additional information:

Pete Skeggs's gravity information page: www.inetarena.com/~noetic/pls/gravity.html James Woodward's mass-reduction theory: www.npl.washington.edu/AV/altvw83.html

Antigravity mailing list: www.in-search-of.com/

John Schnurer's Gravity Society: www.gravity.org/

NASA's breakthrough propulsion physics program: www.lerc.nasa.gov/WWW/bpp/Copyright © 1993-98 Wired Magazine Group Inc. All rights reserved.

Compilation Copyright © 1994-98 Wired Digital Inc. All rights reserved.

ELECTROGRAVITIC SYSTEMS DECLASSIFIED IN 1990

13-1-00034-5879

AF WRIGHT AERONAUTICAL LABORATORIES TECHNICAL LIBRARY Wright-Patterson Air Force Base. Ohio 45433

An examination of electrostatic motion, dynamic counterbary and barycentric control.

Prepared by Gravity Research Group Aviation Studies (International) Limited, London 29-31 Cheval Place. Knightsbridge LONDON S.W. 7 England

Report GRG 013/56 February 1956

It has been accepted as axiomatic that the way to offset the effects of gravity is to use a lifting surface and considerable molecular energy to produce a continously applied force that, for a limited period of time, can remain greater than the effects of gravitational attraction. The original invention of the glider, and evolution of the briefly self-sustaining glider, at the turn of the century led to progressive advances in power and knowledge. This has been directed to refining the classic Wright Brothers' approach. Aircraft design is still fundamentally as the Wrights adumbrated it, with wings, body, tails, moving or flapping controls, landing gear and so forth. The Wright biplane was a powered glider, and all subsequent aircraft, including the supersonic jets of the nineteen-fifties are also powered gliders. Only one fundamentally different flying principle has so far been adopted with varying degrees of success. It is the rotating wing aircraft that has led to the jet lifters and vertical pushers, coleopters, ducted fans and lift induction turbine propulsion systems.

But during these decades there was always the possibility of making efforts to discover the nature of gravity from cosmic or quantum theory, investigation and observation, with a view to discerning the physical properties of aviation's enemy.

It has seemed to Aviation Studies that for some time insufficient attention has been directed to this kind of research. If it were successful such developments would change the concept of sustentation, and confer upon a vehicle qualities that would now be regarded as the ultimate in aviation.

This report summarizes in simple form the work that has been done and is being done in the new field of electrogravitics. It also outlines the various possible lines of research into the nature and constituent matter of gravity, and how it has changed from Newton to Einstein to the modern Hlavaty concept of gravity as an electromagnetic force that may be controlled like a light wave.

The report also contains an outline of opinions on the feasibility of different electrogravitics systems and there is reference to some of the barycentric control and electrostatic rigs in operation.

Also included is a list of references to electrogravitics in successive Aviation Reports since a drive was started by Aviation Studies (International) Limited to suggest to aviation business eighteen months ago that the rewards of success are too far-reaching to be overlooked, especially in view of the hopeful judgement of the most authoritative voice in micro- physics. Also listed are some relevant patents on electrostatics and electrostatic generators in the United States, United Kingdom and France.

GRAVITY RESEARCH GROUP 25 FEBRUARY 1956

Electrogravitics might be described as a synthesis of electrostatic energy used for propulsion - either vertical propulsion or horizontal or both - and gravitics, or dynamic counterbary, in which energy is also used to set up a local gravitational force independent of the earth's.

Electrostatic energy for propulsion has been predicted as a possible means of propulsion in space when the thrust from a neutron motor or ion motor would be sufficient in a dragless environment to produce astronomical velocities. But the ion motor is not strictly a part of the science of eletrogravitics, since barycentric control in an electrogravitics systems is envisaged for a vehicle operating within the earth's environment and it is not seen initially for space application. Probably large scale space operations would have to await the full development of electrogravitics to enable large pieces of equipment to be moved out of the region of the earth's strongest gravity effects. So, though electrostatic motors were thought of in 1925, electrogravitics had its birth after the War, when Townsend Brown sought to improve on the various proposals that then existed for electrostatic motors sufficiently to produce some visible manifestation of sustained motion. Whereas earlier electrostatic tests were essentially pure research Brown's rigs were aimed from the outset at producing a flying article. As a private venture he produced evidence of motion using condensers in a couple of saucers suspended by arms rotating round a central tower with input running down the arms.

The massive-k situation was summarized subsequently in a report, Project Winterhaven, in 1952. Using the data some conclusions were arrived at that might be expected from ten or more years of intensive development - similar to that, for instance, applied to the turbine engine. Using a number of assumptions as to the nature of gravity, the report postulated a saucer as the basis of a possible interceptor with Mach 3 capability. Creation of a local gravitational system would confer upon the fighter the sharp-edged changes of direction typical of motion in space.

The essence of electrogravitics thrust is the use of a very strong positive charge on one side of the vehicle and a negative on the other. The core of the motor is a condenser and the ability of the condenser to hold its charge (the k-number) is the yardstick of performance. With air as 1, current dielectrical materials can yield 6 and use of barium aluminate can raise this considerably, barium titanium oxide (a baked ceramic) can offer 6,000 and there is promise of 30,000, which would be sufficient for supersonic speed.

The original Brown rig produced 30 fps on a voltage of around 50,000 and a small amount of current in the milliamp range. There was no detailed explanation of gravity in Project Winterhaven, but it was assumed that particle dualism in the subatomic structure of gravity would coincide in its effect with the issuing stream of electrons from the electrostatic energy source to produce counterbary. The Brown work probably remains a realistic approach to the practical realization of electrostatic propulsion and sustentation. What- ever may be discovered by the Gravity Research Foundation of New Boston a complete understanding and synthetic reproduction of gravity is not essential for limited success. The electro- gravitics saucer can perform the function of a classic lifting surface - it produces a pushing effect on the under surface and a suction effect on the upper, but, unlike an airfoil, it does not require a flow of air to produce the effect.

First attempts at electrogravitics are unlikely to produce counterbary, but may lead

to development of an electrostatic VTOL vehicle. Even in its development form this might be an advance on the molecular heat engine in its capabilities. But hopes in the new science depend on an understanding of the source and matter of gravity. It is fortuitous that lift can be produced in the traditional fashion and if an understanding of gravity remains beyond full practical control, electrostatic lift might be an adjunct of some significance to modern thrust producers. Research into electrostatics could prove beneficial to turbine development, and heat engines in general, in view of the usable electron potential round the periphery of any flame. Materials for electrogravitics and especially the development of commercial quantities of high-k material is another dividend to be obtained from electrostatic research even if it produces no counterbary. This is a line of development that Aviation Studies' Gravity Research Group is following.

One of the interesting aspects of electrogravitics is that a breakthrough in almost any part of the broad front of general research on the intranuclear processes may be translated into a meaningful advance towards the feasibility of electrogravitics systems. This demands constant monitoring in the most likely areas of the physics of high energy sub-nuclear particles. It is difficult to be overoptimistic about the prospects of gaining so complete a grasp of gravity while the world's physicists are still engaged in a study of fundamental particles - that is to say those that cannot be broken down any more. Fundamental particles are still being discovered - the most recent was the Segre-Chamberlain-Wiegand attachment to the bevatron, which was used to isolate the missing anti-proton, which must - or should be presumed to - exist according to Dirac's theory of the electron. Much of the accepted mathematics of particles would be wrong if the anti-proton was proved to be non-existent. Earlier Eddington has listed the fundamental particles as:-

e The charge of an electron.

m the mass of an electron.

M the mass of a proton.

h Planck's contant

c The velocity of light.

G The constant of gravitation, and

L The cosmological constant

It is generally held that no one of these can be inferred from the others. But electrons may well disappear from among the fundamental particles, though, as Russell says, it is likely that e and m will survive. The constants are much more established than the interpretation of them and are among the most solid of achievements in modern physics.

Gravity may be defined as a small scale departure from Euclidean space in the general theory of relativity. The gravitational constant is one of four dimensionless constants: first, the mass relation of the nucleon and electron. Second is e^2/hc , third, the Compton wavelength of the proton, and fourth is the gravitational constant, which is the ratio of the electrostatic to the gravitational attraction between the electron and the proton.

One of the stumbling blocks in electrogravitics is the absence of any satisfacotry theory linking these four dimensionless quantities. Of the four, moreover, gravity is decidedly the most complex, since any explanation would have to satisfy both cosmic and

quantum relations more acceptably and intelligibly even than in the unified field theory. A gravitational constant of around 10^-30 has emerged from quantum research and this has been used as a tool for finding theories that could link the two relations. This work is now in full progress, and developments have to be watched for the aviation angle. Hitherto Dirac, Eddington, Jordan and others have produced differences in theory that are too wide to be accepted as consistent. It means therefore that (i) without a cosmological basis, and (ii) with an imprecise quantum basis and (iii) a vague hypothesis on the interaction, much remains still to be discovered. Indeed some say that a single interacting theory to link up the dimensionless constants is one of three major unresolved basic problems of physics. The other two main problems are the extension of quantum theory and a more detailed knowledge of the fundamental particles.

All this is some distance from Newton, who saw gravity as a force acting on a body from a distance, leading to the tendency of bodies to accelerate towards each other. He allied this assumption with Euclidean geometry, and time was assumed as uniform and acted independently of space. Bodies and particles in space normally moved uniformly in straight lines according to Newton, and to account for the way they sometimes do not do so, he used the idea of a force of gravity acting at a distance, in which particles of matter cause in others an acceleration proportional to their mass, and inversely proportional to the square of the distance between them.

But Einstein showed how the principle of least action, or the so-called cosmic laziness means that particles, on the contrary, follow the easiest path along geodesic lines and as a result they get readily absorbed into space-time. So was born non-linear physics. The classic example of non-linear physics is the experiment in bombarding a screen with two slits. When both slits are open particles going through are not the sum of the two individually but follows a non-linear equation. This leads on to wave-particle dualism and that in turn to the Heisenberg uncertainty principle in which an increase in accuracy in measurement of one physical quantity means decreasing accuracy in measuring the other. If time is measured accurately energy calculations will be in error; the more accurate the position of a particle is established the less certain the velocity will be; and so on. This basic principle of the acausality of microphysics affects the study of gravity in the special and general theories of relativity. Lack of pictoral image in the quantum physics of this interrelationship is a difficulty at the outset for those whose minds remain obstinately Euclidean.

In the special theory of relativity, space-time is seen only as an undefined interval which can be defined in any way that is convenient and the Newtonian idea of persistent particles in motion to explain gravity cannot be accepted. It must be seen rather as a synthesis of forces in a four dimensional continuum, three to establish the position and one the time. The general theory of relativity that followed a decade later was a geometrical explanation of gravitation in which bodies take the geodesic path through spacetime. In turn this means that instead of the idea of a force acting at a distance it is assumed that space, time, radiation and particles are linked and variations in them from gravity are due rather to the nature of space.

Thus gravity of a body such as the earth, instead of pulling object towards it as Newton postulated, is adjusting the characteristics of space and, it may be inferred, the quan-

tum mechanics of space in the vicinity of the gravitational force. Electrogravitics aims at correcting this adjustment to put matter, so to speak, 'at rest'.

One of the difficulties in 1954 and 1955 was to get aviation to take electrogravitics seriously. The name alone was enough to put people off. However, in the trade much progress has been made and now most major companies in the United States are interested in counterbary. Groups are being organised to study electrostatic and electromagnetic phenomena. Most of industry's leaders have made some reference to it. Douglas has now stated that it has counterbary on its work agenda but does not expect results yet awhile. Hiller has referred to new forms of flying platform, Glenn Martin say gravity control could be achieved in six years, but they add that it would entail a Manhattan District type of effort to bring it about. Sikorsky, one of the pioneers, more or less agrees with the Douglas verdict and says that gravity is tangible and formidable, but there must be a physical carrier for this immense trans-spatial force. This implies that where a physical manifestation exists, a physical device and be developed for creating a similar force moving in the opposite direction to cancel it. Clarke Electronics state thay have a rig, and add that in their view the source of gravity's force will be understood sooner than some people think. General Electric is working on the use of electronic rigs designed to make adjustments to gravity - this line of attack has the advantage of using rigs already in existence for other defence work. Bell also has an experimental rig intended, as the company puts it, to cancel out gravity, and Lawrence Bell has said he is convinced that practical hardware will emerge from current programs. Grover Leoning is certain that what he referred to as an electro-magnetic contra-gravity mechanism will be developed for practical use. Convair is extensively committed to the work with several rigs. Lear Inc., autopilot and electronic engineers have a division of the company working on gravity research and so also has the Sperry division of Sperry-Rand. This list embraces most of the U.S. aircraft industry. The remainder, Curtiss-Wright, Lockheed, Boeing and North American have not yet declared themselves, but all these four are known to be in various stages of study with and without rigs.

In addition, the Massachusetts Institute of Technology is working on gravity, the Gravity Research Foundation of New Boston, the Institute for Advanced Study at Princeton, the CalTech Radiation Laboratory, Princeton University and the University of North Carolina are all active in gravity. Glenn L. Martin is setting up a Research Institute for Advanced Study which has a small staff working on gravity research with the unified field theory and this group is committed to extensive programs of applied research. Many others are also known to be studying gravity, some are known also to be planning a general expansion in this field, such as the proposed Institute for Pure Physics at the University of North Carolina.

A certain amount of work is also going on in Europe. One of the French nationalized constructors and one company outside the nationalized elements have been making preliminary studies, and a little company money has in one case actually been committed. Some work is also going on in Britain where rigs are now in existence. Most of it is private tenure work, such as that being done by Ed Hull, a colleague of Townsend Brown who, as much as anybody, introduced Europe to electrogravitics. Aviation Studies' Gravity Research Group is doing some work, mainly on k studies, and is sponsoring dielectric

investigations.

One Swedish company and two Canadian companies have been making studies, and quite recently the Germans have woken up to the possibilities. Several of the companies have started digging out some of the early German papers on wave physics. They are almost certain to plan a gravitics program. Curiously enough the Germans during the war paid no attention to electrogravitics. This is one line of advance that they did not pioneer in any way and is still basically a U.S. creation. Townsend Brown in electrogravitics is the equivalent of Frank Whittle in gas turbines. This German overlooking of electrostatics is even more surprising when it is remembered how astonishingly advanced and prescient the Germans were in nuclear research. (The modern theory of making thermonuclear weapons without plutonium fission initiators returns to the original German idea that was dismissed, even ridiculed. The Germans never went very far with fission, indeed they doubted that this chain would ever be made to work.) The German air industry, still in the embryo stage, has included electrogravitics among the subjects it intends to examine when establishing the policy that the individual companies will adopt after the present early stage of foreign licence has enabled industry to get abreast of the other countries in aircraft development.

It is impossible to read through this summary of the widening efforts being made to understand the nature of matter of gravity without sharing the hope that many groups now have, of major theoretical breakthroughs occurring before very long. Experience in nucleonics has shown that when attempts to win knowledge on this scale are made, advances are soon seen. There are a number of elements in industry, and some managements, who see gravity as a problem for later generations. Many see nothing in it all and they might be right. But as said earlier, if Dr. Vaclav Hlavaty thinks gravity is potentially controllable that surely should be justification enough, and indeed inspiration, for physicists to apply their minds and for management to take a risk. Hlavaty is the only man who thinks he can see a way of doing the mathematics to demonstrate Einstein's unified field theory - something that Einstein himself said was beyond him. Relativity and the unified field theory go to the root of electrogravitics and the shifts in thinking, the hopes and fears, and a measure of progress is to be obtained only in the last resort from men of this stature.

Major theoretical breakthroughs to discover the sources of gravity will be made by the most advanced intellects using the most advanced research tools. Aviation's role is therefore to impress upon physicists of this calibre with the urgency of the matter and to aid them with statistical and peripheral investigations that will help to clarify the background to the central mathematics and physical puzzles. Aviation could also assist by recruiting some of these men as advisers. Convair has taken the initiative with its recently established panel of advisers on nuclear projects, which include Dr. Edward Teller of the University of California. At the same time much can be done in development of laboratory rigs, condenser research and dielectric development, which do not require anything like the same cerebral capacity to get results and make a practical contribution.

As gravity is likely to be linked with the new particles, only the highest powered particle accelerators are likely to be of use in further fundamental knowledge. The coun-

try with the biggest tools of this kind is in the best position to examine the characteristics of the particles and from these countries the greatest advances seem most likely.

Though the United States has the biggest of the bevatrons - the Berkeley bevatron is 6.2 bev - the Russians have a 10 bev accelerator in construction which, when it is completed, will be the world's largest. At Brookhaven a 25 bev instrument is in development which, in turn, will be the biggest. Other countries without comparable facilities are of course at a great disadvantage from the outset in the contest to discover the explanations of gravity. Electrogravitics, moreover, unfortunately competes with nuclear studies for its facilities. The clearest thinking brains are bound to be attracted to locations where the most extensive laboratory equipment exists. So, one way and another, results are most likely to come from the major countries with the biggest undertakings. Thus the nuclear facilities have a direct bearing on the scope for electrogravitics work.

The OEEC report in January made the following points:-

The U.S. has six to eight entirely different types of reactor in operation and many more under construction. Europe has now two different types in service.

The U.S. has about 30 research reactors plus four in Britain, two in France.

The U.S. has two nuclear-powered marine engines. Europe has none, but the U.K. is building one.

Isotope separation plants for the enrichment of uranium in the U.S. are roughly 11 times larger than the European plant in Britain.

Europe's only heavy water plant (in Norway) produces somewhat less than one-twentieth of American output.

In 1955 the number of technicians employed in nuclear energy work in the U.S. was about 15,000; there are about 5,000 in Britain, 1,800 in France, and about 1,000 in the rest of Europe. But the working party says that pessimistic conclusions should not be drawn from these comparisons. European nuclear energy effort is evenly divided at the moment, but some countries have notable achievements to their credit and important developments in prospect. The main reason for optimism is that, taken as a whole, "Europe's present nuclear effort falls very far short of its industrial potential".

Though gravity research, such as there has been of it, has been unclassified, new principles and information gained from the nuclear research facilities that have a vehicle application is expected to be withheld.

The heart of the problem to understanding gravity is likely to prove to be the way in which the very high energy sub-nuclear particles convert something, whatever it is, continuously and automatically into the tremendous nuclear and electromagnetic forces. Once this key is understood, attention can later be directed to finding laboratory means of duplicating the process and reversing its force lines in some local environment and returning the energy to itself to produce counterbary. Looking beyond it seems possible that gravitation will be shown to be a part of the universal electro-magnetic processes and controlled in the same way as a light wave or radio wave. This is a synthesis of the Einstein and Hlavaty concepts. Hence it follows that though in its initial form the mechanical processes for countering gravity may initially be massive to deal with the massive forces involved, eventually this could be expected to form some central power

generation unit. Barycentric control in some required quantity could be passed over a distance by a form of radio wave. The prime energy source to energise the waves would of course be nuclear in its origins.

It is difficult to say which lines of detailed development being processed in the immediate future is more likely to yield significant results. Perhaps the three most promising are: first, the new attempt by the team of men led by Chamberlain working with the Berkeley bevatron to find the anti-neutron, and to identify more of the characteristics of the anti-proton* and each of the string of high energy particles that have been discovered during recent operations at 6.2 bev.

A second line of approach is the United States National Bureau of Standards program to pin down with greater accuracy the acceleration values of gravity. The presently accepted figure *(The reaction is as follows: protons are accelerated to 6.2 bev, and directed at a target of copper. When the proton projectile hits a neutron in one of the copper atoms the following emerge: the two original particles (the projectile and the struck neutron) and a new pair of particles, a proton and anti-proton. The anti-proton continues briefly until it hits another proton, then both disappear and decay into mesons) of 32.174 feet per second per second is known to be not comprehensive, though it has been sufficiently accurate for the limited needs of industry hitherto. The NBS program aims at redetermining the strength of gravity to within one part of a million. The present method thas been to hold a ball 16 feet up and chart the elapsed time of descent with electronic measuring equipment. The new program is based on the old, but with this exceptional degree of accuracy it is naturally immensely more difficult and is expected to take 3 years.

A third promising line is the new technique of measuring high energy particles in motion that was started by the University of California last year. This involves passing cosmic rays through a chamber containing a mixture of gas, alcohol and water vapour. This creates charged atoms, or positive ions, by knocking electrons off the gas molecules. A sudden expansion of the chamber results in a condensation of water droplets along the track which can be plotted on a photographic plate. This method makes it easier to assess the energy of particles and to distinguish one from the other. It also helps to establish the characteristics of the different types of particles. The relationship between these high energy particles, and their origin, and characteristics, have a bearing on electrogravitics in general.

So much of what has to be discovered as a necessary preliminary to gravity is of no practical use by itself. There is no conceivable use, for instance, for the anti-proton, yet its discovery even at a cost of \$9-million is essential to check the mathematics of the fundamental components of matter. Similarly it is necessary to check that all the nuclear ghosts that have been postulated theoretically do in fact exist. It is not, moreover, sufficient, as in the past, only to observe the particles by radiation counters. In each instance a mechanical maze has to be devised and attached to a particle accelerator to trap only the particle concerned. Each discovery becomes a wedge for a deeper probe of the nucleus. Many of the particles of very high energy have only a fleeting existence and collisions that give rise to them from bevatron bombardment is a necessary pre-requisite to an understanding of gravity. There are no shortcuts to this process.

Most of the major programs for extending human knowledge on gravity are being conducted with instruments already in use for nuclear research and to this extent the cost of work exclusively on gravitational examinations is still not of major proportions. This has made it difficult for aviation to gauge the extent of the work in progress on gravity research.

CONCLUSIONS

- 1. No attempts to control the magnitude or direction of the earth's gravitational force have yet been successful. But if the explanation of gravity is to be found in the as yet undetermined characteristics of the very high energy particles it is becoming increasingly possible with the bevatron to work with the constituent matter of gravity. It is therfore reasonable to expect that the new bevatron may, before long, be used to demonstrate limited gravitational control.
- 2. An understanding and identification of these particles is on the frontiers of human knowledge, and a full assessment of them is one of the major unresolved puzzles of the nucleus. An associated problem is to discover a theory to account for the cosmic and quantum relations of gravity, and a theory to link the gravitational constant with the other three dimensionless constants.
- 3. Though the obstacles to an adequate grasp of microphysics still seem formidable, the transportation rewards that could follow from electrogravitics are as high as can be envisaged. In a weightless environment, movement with sharp-edged changes of direction could offer unique manoeuvrability.
- 4. Determination of the environment of the anti-proton, discovery of the anti-neutron and closer examination of the other high energy particles are preliminaries to the hypothesis that gravity is one aspect of electromagnetism that may eventually be controlled like a wave. When the structure of the nucleus becomes clearer, the influence of the gravitational force upon the nucleus and the nature of its behaviour in space will be more readily understood. This is a great advance on the Newtonian concept of gravity acting at a distance.
- 5. Aviation's role appears to be to establish facilities to handle many of the peripheral and statistical investigations to help fill in the background on electrostatics.
- 6. A distinction has to be made between electrostatic energy for propulsion and counterbary. Counterbary is the manipulation of gravitational force lines; barycentric control is the adjustment to such manipulative capability to produce a stable type of motion suitable for transportation.
- 7. Electrostatic energy sufficient to produce low speeds (a few thousand dynes) has already been demonstrated. Generation of a region of positive electrostatic energy on one side of a plate and negative on the other sets up the same lift or propulsion effect as the pressure and suction below and above a wing, except that in the case of electrostatic application no airflow is necessary.
- 8. Electrostatic energy sufficient to produce a Mach 3 fighter is possible with megavolt energies and a k of over 10,000.
- 9. k figures of 6,000 have been obtained from some ceramic materials and there are prospects of 30,000.

- 10. Apart from electrogravitics there are other rewards from investment in electrostatic equipment. Automation, autonetics and even turbine development use similar laboratory facilities.
- 11. Progress in electrogravitics probably awaits a new genius in physics who can find a single equation to tie up all the conflicting observations and theory on the structure and arrangement of forces and the part the high energy particles play in the nucleus. This can occur any time, and the chances are improved now that bev energies are being obtained in controlled laboratory conditions.

APPENDIX I

EXTRACTS FROM AVIATION REPORT

ANTI-GRAVITATION RESEARCH

The basic research and technology behind electro-anti-gravitation is so much in its infancy that this is perhaps one field of development where not only the methods but the ideas are secret. Nothing therefore can be discussed freely at the moment. Very few papers on the subject have been prepared so far, and the only schemes that have seen the light of day are for pure research into rigs designed to make objects float around freely in a box. There are various radio applications, and aviation medecine departments have been looking for something that will enable them to study the physiological effects on the digestion and organs of an environment without gravity. There are however long term aims of a more revolutionary nature that envisage equipment that can defeat gravity.

Aviation Report 20 August 1954

MANAGERIAL POLICY FOR ANTI-GRAVITICS

The prospect of engineers devising gravity-defeating equipment - or perhaps it should be described as the creation of pockets of weightless environments - does suggest that as a long term policy aircraft constructors will be required to place even more emphasis on electro-mechanical industrial plant, than is now required for the transition from manned to unmanned weapons. Anti-gravitics work is therefore likely to go to companies with the biggest electrical laboratories and facilities. It is also apparent that anti-gravitics, like other advanced sciences, will be initially sponsored for its weapon capabilities. There are perhaps two broad ways of using the science, one is to postulate the design of advanced type projectiles on their best inherent capabilities, and the more critical parameters (that now constitutes the design limitation) can be eliminated by anti-gravitics. The other, which is a longer term plan, is to create an entirely new environment with devices operating entirely under an anti-gravitic envelope.

Aviation Report 24 August 1954

THE GREATER THE EASIER

Propulsion and atomic energy trends are similar in one respect: the more incredible the long term capabilities are, the easier it is to attain them. It is strange that the greatest of nature's secrets can be harnessed with decreasing industrial effort, but greatly increasing mental effort. The Americans went through the industrial torture to produce tritium for the first thermonuclear experiment, but later both they and the Russians were able to achieve much greater results with the help of lithium 6 hydride. The same thing is

happening in aviation propulsion; the nuclear fuels are promising to be tremendously powerful in their effect, but excessively complicated in their application, unless there can be some means of direct conversion as in the strontium 90 cell. But lying behind and beyond the nuclear fuels is the linking of electricity to gravity, which is an incomparably more powerful way of harnessing energy than the only method known to human intellect at present - electricity and magnetism. Perhaps the magic of barium aluminum oxide will perform the miracle in propulsion that lithium 6 hydride has done in the fusion weapon. Certainly it is a well-known material in dielectrics, but when one talks of massive-k, one means of course five figures. At this early stage it is difficult to relate k to Mach numbers with any certainty, but realizable k can, with some kinds of arithmetic, produce astounding velocities. They are achievable, moreover, with decreasing complexity, indeed the ultimate becomes the easiest in term of engineering, but the most hideous in terms of theory. Einstein's general theory of relativity is, naturally, and important factor, but some of the postulates appear to depend on the unified field theory, which cannot yet be physically checked because noone knows how to do it. Einstein hopes to find a way of doing this before he dies.

Aviation Report 31 August 1954

GRAVITICS FORMULATIONS

All indications are that there has still been little cognizance of the potentialities of electrostatic propulsion and it will be a major undertaking to re-arrange aircraft plants to conduct large-scale research and development into novel forms of dielectric and to improve condenser efficiencies and to develop the novel type of materials used for fabrication of the primary structure. Some extremely ambitious theoretical programs have been submitted and work towards realization of a manned vehicle has begun. One the evidence, there are far more definite indications that the incredible claims are realizable than there was, for instance, in supposing that uranium fission would result in a bomb. At least it is known, proof positive, that motion, using surprisingly low k, is possible. The fantastic control that again is feasible, has not yet been demonstrated, but there is no reason to suppose the arithmetic is faulty, especially as it has already led to a quite brisk example of actual propulsion. That first movement was indeed an historic occasion, reminiscent of the momentous day at Chicago when the first pile went critical, and the phenomenon was scarcely less weird. It is difficult to imagine just where a wellorganized examination into long term gravitics would end. Though a circular planform is electrostatically convenient, it does not necessarily follow that the requirements of control by differential changes would be the same. Perhaps the strangest part of this whole chapter is how the public managed to foresee the concept, though not of course the theoretical principles that gave rise to it, before physical tests confirmed that the mathematics was right. It is interesting also that there is no point of contact between the conventional science of aviation and the New: it is a radical offshoot with no common principles. Aerodynamics, structures, heat engines, flapping controls, and all the rest of aviation is part of what might be called the Wright Brothers era, even the Mach 2.5 thermal barrier piercers are still Wright Brothers concepts, in the sense that they fly and they stall, and they run out of fuel after a short while, and they defy the earth's pull for a short while. Thus this century will be divided into two parts - almost to the day. The first

half belonged to the Wright Brothers who foresaw nearly all the basic issues in which gravity was the bitter foe. In part of the second half, gravity will be the great provider. Electrical energy, rather irrelevant for propulsion in the first half becomes a kind of catalyst to motion in the second half of the century.

Aviation Report 7 September 1954

ELECTRO-GRAVITICS PARADOX

Realization of electro-static propulsion seems to depend on two theoretical twists and two practical ones. The two theoretical puzzles are: first, how to make a condenser the centre of a propulsion system, and the second is how to link the condenser system with the gravitational field. There is a third problem, but it is some way off yet, which is how to manipulate kva for control in all three axes as well as for propulsion and lift. The two practical tricks are first how, with say a Mach 3 weapon in mind, to handle a 50,000 kva within the envelope of a thin pancake of 35 feet in diameter and second how to generate such power from within so small a space. The electrical power in a small aircraft is more than a fair sized community the analogy being that a single rocketjet can provide as much power as can be obtained from the Hoover Dam. It will naturally take as long to develop electro-static propulsion as it has taken to coax the enormous power outputs from heat engines. True there might be flame in the electro-gravitic propulsion system, but it would not be a heat engine - the temperature of the flame would be incidental to the function of the chemical burning process.

The curious thing is that though electro-static propulsion is the antithesis of magnetism,* Einstein's unified field theory is an attempt to link gravitation with electro-magnetism. This all-embracing theory goes on logically from the general theory of relativity, that gives an ingenious geometrical interpretation of the concept of force which is mathematically consistent with gravitation but fails in the case of electro-magnetism, while the special theory of relativity is concerned with the relationship between mass and energy. The general theory of relativity fails to account for the electro-magnetism because the forces are proportional to the charge and not to the mass. The unified field theory is one of a number of attempts that have been made to bridge this gap, but it is baffling to imagine how it could ever be observed. Einstein himself thinks it is virtually impossible. However, Hlavaty claims to have solved the equations by assuming that gravitation is a manifestation of electro-magnetism.

This being so it is all the more incredible that electro-static *(Though in a sense this is true, it is better expressed in the body of this report than it was here in 1954) propulsion (with kva for convenience fed into the system and not self-generated) has actually been demonstrated. It may be that to apply all this very abstruse physics to aviation it will be necessary to accept that the theory is more important than this or that interpretation of it. This is how the physical constants, which are now regarded as among the most solid of achievements in modern physics, have become workable, and accepted. Certainly all normal instincts would support the Einstein series of postulations, and if this is so it is a matter of conjecture where it will lead in the long term future of the electrogravitic science.

Aviation Report 10 September 1954

ELECTRO-GRAVITIC PROPULSION SITUATION

Under the terms of Project Winterhaven the proposals to develop electro-gravitics to the point of realizing a Mach 3 combat type of disc were not far short of the extensive effort that was planned for the Manhattan District.* Indeed the drive to develop the prime mover is in some respects rather similar to the experiments that led to the release of nuclear energy in the sense that both involve fantastic mathematical capacity and both are sciences so new that other allied sciences cannot be of very much guide. In the past two years since the principle of motion by means of massive-k was first demonstrated on a test rig, progress has been slow. But the indications are now that the Pentagon is ready to sponsor a range of devices to help further the knowledge. In effect the new family of TVs would be on the same tremendous scope that was envisaged by the X-1,2,3,4 and 5 and the D.558s that were all created for the purpose of destroying the sound barrier which they effectively did, but it is a process that is taking ten solid years of hard work to complete. (Now after 7 years the X-2 has yet to start its tests and the X-3 is still in performance testing stage). Tentative targets ... anticipate that the first disc should be complete before 1960 and it would take the whole of the sixties to develop it properly, even though some combat things might be available ten years from now.

One thing seems certain at this stage, that the companies likely to dominate the science will be those with the biggest *(The proposals, it should be added, were not accepted) computors to work out the ramifications of the basic theory. Douglas is easily the world's leader in computor capacity, followed by Lockheed and Convair. The frame incidentally is indivisible from the engine. If there is to be any division of responsibility it would be that the engine industry might become responsible for providing the electrostatic energy (by, it is thought, a kind of flame) and the frame maker for the condenser assembly which is the core of the main structure.

Aviation Report 12 October 1954

GRAVITICS STUDY WIDENING

The French are now understood to be pondering the most effective way of entering the field of electro-gravitic propulsion systems. But not the least of the difficulties is to know just where to begin. There are practically no patents so far that throw very much light on the mathematics of the relation between electricity and gravity. There is, of course, a large number of patents on the general subject of motion and force, and some of these may prove to have some application. There is, however, a series of working postulations embodied in the original Project Winterhaven, but no real attempt has been made in the working papers to go into the detailed engineering. All that had actually been achieved up to just under a year ago was a series of fairly accurate extrapolations from the sketchy data that has so far been actually observed. The extrapolation of 50 mph to 1,800 mph, however, (which is what the present hopes and aspirations amount to) is bound to be a rather vague exercise. This explains American private views that nothing can be reasonably expected from the science for yet awhile. Meanwhile, the NACA is active, and nearly all of the Universities are doing wokr that borders close to what is involved here, and something fruitful is likely to turn up before very long.

Aviation Report 19 October 1954

GRAVITIC STEPS

Specification writers seem to be still rather stumped to know what to ask for in the very hazy science of electro-gravitic propelled vehicles. They are at present faced with having to plan the first family of things - first of these is the most realistic type of operational test rig, and the second the first type of test vehicle. In turn this would lead to sponsoring of a combat disc. The preliminary test rigs which gave only feeble propulsion have been somewhat improved, but of course the speeds reached so far are only those more associated with what is attained on the road rather than in the air. But propulsion is now known to be possible, as it is a matter of feeding enough KVA into condensers with better k figures. 50,000 is a magic figure for the combat saucer, it the is the amount of KVA and this amount of k that can be translated into Mach 3 speeds.

Meanwhile Glenn Martin now feels ready to say in public that they are examining the unified field theory to see what can be done. It would probably be truer to say that Martin and other companies are now looking for men who can make some kind of sense out of Einstein's equations. There's nobody in the air industry at present with the faintest idea of what it is all about. Also, just as necessary, companies have somehow to find administrators who know enough of the mathematics to be able to guess what kind of industrial investment is likely to be necessary for the company to secure the most rewarding prime contracts in the new science. This again is not so easy since much of the mathematics just cannot be translated into words. You either understand the figures, or you cannot ever have it explained to you. This is rather new because even things like indeterminacy in quantum mechanics can be more or less put into words.

Perhaps the main thing for management to bear in mind in recruiting men is that essentially electro-gravitics is a branch of wave technology and much of it starts with Planck's dimensions of action, energy and time, and some if this is among the most firm and least controversial sections of modern atomic physics.

Aviation Report 19 November 1954

ELECTRO-GRAVITICS PUZZLE

Back in 1948 and 49, the public in the U.S. had a surprisingly clear idea of what a flying saucer should, or could, do. There has never at any time been any realistic explanation of what propulsion agency could make it do those things, but its ability to move within its own gravitation field was presupposed from its manoeuvrability. Yet all this was at least two years before electro-static energy was shown to produce propulsion. It is curious that the public were so ahead of the empiricists on this occasion, and there are two possible explanations. One is that optical illusions or atmospheric phenomena offered a preconceived idea of how the ultimate aviation device ought to work. The other explanation might be that this was a recrudescence of Jung's theory of the Universal Mind which move up and down in relation to the capabilities of the highest intellects and this may be a case of it reaching a very high peak of perception.

But for the air industries to realize an electro-gravitic aircraft means a return to basic principles in nuclear physics, and a re-examination of much in wave technology that has hitherto been taken for granted. Anything that goes any way towards proving the unified field theory will have as great a bearing on electro-gravitics efforts as on the furtherance

of nuclear power generally. But the aircraft industry might as well face up to the fact that priorities will in the end be competing with existing nuclear science commitments. The fact that electro-gravitics has important applications other than for a weapon will however strengthen the case for governments to get in on the work going on.

Aviation Report 28 January 1955

MANAGEMENT NOTE FOR ELECTRO-GRAVITICS

The gas turbine engine produced two new companies in the U.S. engine field and they have, between them, at various times offered the traditional primes rather formidable competition. Indeed GE at this moment has, in the view of some, taken the Number Two position. In Britain no new firms managed to get a footing, but one, Metro-Vick, might have done if it had put its whole energies into the business. It is on the whole unfortunate for Britain that no bright newcomer has been able to screw up competition in the engine field as English Electric have done in the airframe business.

Unlike the turbine engine, electro-gravitics is not just a new propulsion system, it is a new mode of thought in aviation and communications, and it is something that may become all-embracing. Theoretical studies of the science unfortunately have to extend right down to the mathematics of the meson and there is no escape from that. But the relevant facts wrung from the nature of the nuclear structure will have their impact on the propulsion system, the airframe and also its guidance. The airframe, as such, would not exist, and what is now a complicated stressed structure becomes some convenient form of hard envelope. New companies therefore who would like to see themselves as major defence prime contractors in ten or fifteen years time are the ones most likely to stimulate development. Several typical companies in Britain and the U.S. come to mind - outfits like AiResearch, Raytheon, Plessey in England, Rotex and others. But the companies have to face a decade of costly research into theoretical physics and it means a great deal of trust. Companies are mostly overloaded already and they cannot afford it, but when they sit down and think about the matter they can scarcely avoid the conclusion that they cannot affor not to be in at the beginning.

Aviation Report 8 February 1955

ELECTRO-GRAVITICS BREAKTHROUGHS

Lawrence Bell said last week that he thought that the tempo of development leading to the use of nuclear fuels and anti-gravitational vehicles (he meant presumabley ones that create their own gravitational field independently of the earth's) would accelerate. He added that the breakthroughs now feasible will advance their introduction ahead of the time it has taken to develop the turbojet to its present pitch. Beyond the thermal barrier was a radiation barrier, and he might have added ozone poisoning and meteorite hazards, and beyond that again a time barrier. Time however is not a single calculable entity and Einstein has taught that an absolute barrier to aviation is the environmental barrier in which there are physical limits to any kind of movement from one point in space-time continuum to another. Bell (the company not the man) have a reputation as 30- experimentalists and are not so earthy as some of the other U.S. companies; so while this first judgement on progress with electrogravitics is interesting, further word is awaited from the other major elements of the air business. Most of the companies are

now studying several forms of propulsion without heat engines though it is early days yet to determine which method will see the light of day first. Procurement will open out because the capabilities of such aircraft are immeasureably greater than those envisaged with any known form of engine.

Aviation Report 15 July 1955

THERMONUCLEAR-ELECTROGRAVITICS INTERACTION

The point has been made that the most likely way of achieving the comparatively low fusion heat needed - 1,000,000 degrees provided it can be sustained (which it cannot be in fission for more than a microsecond or two at a time) - is by use of a linear accelerator. The concentration of energy that may be obtained when accelerators are rigged in certain ways make the production of very high temperatures feasible but whether they could be concentrated enough to avoid a thermal heat problem remains to be seen. It has also been suggested that linear accelerators would be the way to develop the high electrical energies needed for creation of local gravitation systems. It is possible therefore to imagine that the central core of a future air vehicle might be a linear accelerator which would create a local weightless state by use of electrostatic energy and turn heat into energy without chemical processes for propulsion. Eventually - towards the end of this century - the linear accelerator itself would not be required and a ground generating plant would transmit the necessary energy for both purposes by wave propagation.

Aviation Report 30 August 1955

POINT ABOUT THERMONUCLEAR REACTION REACTORS

The 20 year estimate bye the AEC last week that lies between present research frontiers and the fusion reactor probably refers to the time it will take to tap fusion heat. But it may be thought that rather than use the molecular and chemical processes of twisting heat into thrust, it would be more appropriate to use the new heat source in conjunction with some form of nuclear thrust producer which would be in the form of electrostatic energy. The first two Boeing nuclearjet prototypes now under way are being designed to take either molecular jets or nuclear jets in cse the latter are held up for one reason or another. But the change from molecular to direct nuclear thrust production in conjunction with the thermonuclear reactor is likely to make the aircraft designed around the latter a totally different breed of cat. It is also expected to take longer than two decades, though younger executives in trade might expect to live to see a prototype.

Aviation Report 14 October 1955

ELECTROGRAVITICS FEASIBILITY

Opinion on the prospects of using electrostatic energy for propulsion, and eventually for creation of a local gravitational field isolated from the earth's has naturally polarized into the two opposite extremes. There are those who say it is nonsense from start to finish, and those who are satisfied from performance already physically manifest that it is possible and will produce air vehicles with absolute capabilities and no moving parts. The feasibility of a Mach 3 fighter (the present aim of studies) is dependent on a rather large k extrapolation, considering the pair of saucers that have physically demonstrated the principle only achieved a speed of some 30 fps. But, and this is important, they have attained a working velocity using a very inefficient (even by today's knowledge) form of

condenser complex. These humble beginnings are surely as hopeful as Whittle's early postulations.

It was, by the way, largely due to the early references in Aviation report that this work is gathering momentum in the U.S. Similar studies are beginning in France, and in England some men are on the job full time.

Aviation Report 15 November 1955

ELECTRO-GRAVITICS EFFORT WIDENING

Companies studying the implications of gravitics are said, in a new statement, to include Glenn Martin, Convair, Sperry-Rand, Sikorsky, Bell, Lear Inc. and Clark Electronics. Other companies who have previously evinced interest include Lockheed, Douglas and Hiller. The remainder are not disinterested, but have not given public support to the new science - which is widening all the time. The approach in the U.S. is in a sense more ambitious than might have been expected. The logical approach, which has been suggested by Aviation Studies, is to concentrate on improving the output of electrostatic rigs in existence that are know to be able to provide thrust. The aim would be to concentrate on electrostatics for propulsion first and widen the practical engineering to include establishment of local field forcelines, independent of those of the earth's, to provide unfettered vertical movement as and when the mathematics develops.

However, the U.S. approach is rather to put money into fundamental theoretical physics of gravitation in an effort first to create the local gravitational field. Working rigs would follow in the wake of the basic discoveries. Probably the correct course would be to sponsor both approaches, and it is now time that the military stepped in with big funds. The trouble about the idealistic approach to gravity is that the aircraft companies do not have the men to conduct such work. There is every expectation in any case that the companies likely to find the answers lie outside the aviation field. These would emerge as the masters of aviation in its broadest sense.

The feeling is therefore that a company like A.T. & T. is most likely to be first in this field. This giant company (unknown in the air and weapons field) has already revolutionized modern warfare with the development of the junction transistor and is expected to find the final answers to absolute vehicle levitation. This therefore is where the bulk of the sponsoring money should go.

Aviation Report 9 December 1955

AMERICA'S NUCLEAR SAUCER

The official designation for America's nuclear flying saucer was the Lenticular Reentry Vehicle (LRV). It was designed by engineers at the Los Angeles Division of North American Aviation, under a contract with the U.S. Air Force. The project was managed out of Wright-Patterson Air Force Base, in Dayton, Ohio, where German engineers who had worked on rocket plane and flying disc technology had been resettled.

THE EXPECTATION OF EXTRATERRESTRIALS

One of the most fascinating discoveries that anyone who has investigated the supernatural eventually makes, is the fact that there exists today - even in well educated circles - a belief that our world is receiving communications from higher intelligences - intelligences which are readying mankind for an extraterrestrial visitation. It is absolutely in-

credible how the stories concerning UFOs seem to coincide on this point. The emergence of hundreds of UFO cult groups within the last few decades, all preaching a similar message, along with the appearance of such films as Close Encounters, Independence Day, The Arrival, Fire in the Sky and films of a similar nature are evidence of a growing belief, or at least interest, in the inevitability of a soon-to-come contact with beings not of this earth - of spiritual beings who are soon to descend on our world in great numbers. For how else can it be explained that so many different groups in so many different parts of the world - entirely unknown to each other - claim to have heard essentially the same message?

We are left to consider seriously the possibility that intelligences of great power beyond our earth have a selfish interest and purpose in preparing our world to accept personages they would like to install as our world rulers.

And herein lies the awful meaning behind the Seven Trumpets! This is their terrible secret! The Bible has a lot more to say about them than most people realize. The unveiling of this horrible mystery, parable, or cipher actually begins with the Sixth Seal.

"And I looked when He broke the sixth seal, and there was a great earthquake ... "and the stars of the sky fell to the earth, as a fig tree casts its unripe figs when with the shaken by a great wind." (Rev. 6:12-13)

Once again, we are confronted with a riddle, a parable, for it cannot possibly be assumed that stars will fall on the earth - if only because the earth would immediately cease to exist. The key to the riddle must lie in the use of the word, "stars." It is a code word. But what could it possibly mean? Again, the answer is not all that difficult and is rendered somewhat more intelligible when compared to certain other verses in Revelation chapter 12: "And another sign appeared in heaven: and behold, a great red dragon having seven heads and ten horns, and on his heads were seven diadems [crowns]. "And his tail swept away a THIRD of the STARS of heaven, AND THREW THEM TO THE EARTH. ..."And there was war in heaven, Michael and his angels waging war with the dragon. And the dragon and his angels waged war, "And the great dragon was thrown down, the serpent of old who is called the devil and Satan, who deceives the whole world; he was thrown down to the earth, and his angels were thrown down with him.

"And I heard a loud voice in heaven, saying, "Now the salvation, and the power, and the kingdom of our God and the authority of His Christ have come, for the accuser of our brethren has been thrown down, who accuses them before our God day and night.

"For this reason, rejoice, O heavens and you who dwell in them. [BUT] WOE TO THE EARTH AND THE SEA, BECAUSE THE DEVIL HAS COME DOWN TO YOU, HAVING GREAT WRATH, KNOWING THAT HE HAS ONLY A SHORT TIME." (Rev 12:1-13)

What does all this mean? Simply on the face of it, these verses are frightening indeed. The use of the word "stars" in Revelation 12 obviously is made in reference to angelic beings. This is substantiated by Job 38:1-7: "Then the Lord answered Job [from] out of the whirlwind and said, "Who is this that darkens counsel by words without knowledge? "Now gird up your loins like a man, and I will ask you, and you instruct Me!

"Where were you when I laid the foundation plan of the earth? Tell Me, if you have understanding,

- "Who set its measurements, since you know? Or who stretched the line on it?
- "On where were its bases sunk? Or who laid its cornerstone,
- "When the morning STARS sang together, all the sons of God shouted for joy?" (Job 38:1-7)

A better translation of the term, sons of God, is sons of Elohim, and means literally angels of God; and finally, the term "angels of God" is here equated with morning STARS. This exact same expression occurs four other times in the Old Testament, and in each instance it means "angels of God." Thus, the verses above lend a certain dreadful credibility to the assertions of the UFO cultists, for it cannot possibly be assumed that the sightings referred to above are of God's angels, but rather of Satan's.

A fuller explanation requires a brief digression into some of the darkest secrets of the Bible - and it is perhaps necessary that we make such a digression at this point.



MAN THE CENTER OF ALL THINGS

We live today in a world dominated by science and technology. Reason and progress - these are the passwords of the Twentieth Century. Rationalism, positivism, and materialism have become the pillars of our society. Indeed, it is perhaps not too much to say that the vitality of Western Civilization itself rests in its magnificent scientific and technological advances. This progress can be seen everywhere: in our architecture; in our schools; in our vast, new, high-tech industries; in our accomplishments in space, etc. A scientific and skeptical attitude towards the supernatural seemingly predominates. What cannot be seen, touched, and scientifically verified is cast off as superstition and "old wives fables."

Man has become the center of all things in today's science: he has replaced God. The thinking of our Twentieth Century science is almost totally man-centered: it is egotistical and selfish as the titanic arrogance of men like astronomer Carl Sagan so clearly attests. However, despite all of its claims to modernity, this kind of thinking is really not new and was reflected long ago by another people equally renowned for their achievements in the Ancient World -people who today lie wasted in the ruins of their once glorious civilizations - the Greeks. The Greek Sophocles wrote in Antigone:

"What a thing is man! Among all wonders, the wonder of the world is man himself ...
Man the Contriver! Man the Master-mind."[1]

The thought that there might exist principalities and powers greater than man is not entertained by today's science. The mere mention of the supernatural is often received with a smile of incredu-lous contempt. And there are not a few professing Christians of the liberal persuasion who manifest a great anxiety to explain away the supernatural and to limit as far as possible its recurrence in the present time, though they do not totally deny its reality. But that Satan can work wonders, they will never allow, and in many cases they seek even to deny his existence.

THE WORLD BEYOND OUR WORLD

But today's science - i.e., rationalism - is merely a flickering candle when compared to another reality - a reality, though obscured and half-hidden, is as true, nonetheless, as is the seen reality of science and technology. And when compared to this other reality, reason and science are but the tip of an iceberg that shows above the water, while submerged down below is the great mass of that which is true and real. Deny as we will the existence of this other reality, we are, nonetheless, reminded of it constantly. At night it comes to us when we are alone. Perhaps we are visited by its presence during the day in

a solitary walk on the beach or in the forest. Sometimes it comes to us in day-dreams when at work; but, somehow, it is always there - and we know it! Hollywood knows it, too. Stephen Spielberg and George Lucas know it as well. Our young people know it. Movies such as Gremlins, Ghostbuster, The Shinning, E.T., Star Wars, Amityville Horror, The Exorcist, Independence Day, The Arrival, Fire in the Sky and The Omen openly declare the reality of this other world.

And despite all the protestations to the contrary, the so-called secular world is also deeply involved today with the supernatural. Even our institutions of higher learning acknowledge the presence of this other reality. Indeed, the psychology departments of many of our finest colleges and universities have, in recent years, become nothing more than "fronts" for the investigation of para-psychology - that is to say, clairvoyance, astrology, etc. - and scholastic credit is offered in these subjects. Our best police departments openly consult and even employ [often quite successfully] psychics in the investigation of crimes.

THE REALITY OF THE KINGDOM OF DARKNESS

Moreover, the simple assertions of the Scriptures should suffice as to the reality of this other world (II Thess. 2:9). And it is indeed an evil and somber empire! Whenever the Scriptures lift the veil, and allow us a momentary glimpse into the Kingdom of Darkness, we behold a malignant and evil community, but one perfect in order and government, and one that thirsts for the subjugation of the human race. If it could, it would doubtlessly annex all of our world to its own dominion. Indeed, the heaven which surrounds our world swarms with evil spirits. And while God has forbidden these spirits to communicate with man and has placed a gulf between them and us, they, nonetheless, break through from time to time - defying God - since they are not at present restrained by force. And this is confirmed by the Scriptures, for we find countless allusions to unlawful dealings between men and these spirits in the Old Testament, while in the New Testament, witchcraft [which is the unlawful relationship between men and the kingdom of Darkness] is treated as one of the works of the flesh. (Gal. 5:20)

THE SPHERE AND ORGANIZATION OF SATAN'S EMPIRE

It is perhaps necessary at this point to describe, as succinctly as possible, the arrangement of this evil empire - for unless we are made at least somewhat aware of its organization, we cannot truly appreciate the magnitude of the events which will transpire during the second half of the Seventieth Week [The Great Tribulation] or comprehend the depths of darkness into which the world will be plunged at this time.

It is commonly believed by many Christians that the abode of Satan and his followers is in the depths of the earth. While this may indeed ultimately be the case, it most certainly is not now. The Bible refers to him as the Prince of this World. Moreover, in doing so, it indicates that this title is not one that was usurped, but one that he holds legitimately and which belongs to him by right, together with great power and dignity for how else does one explain the fact that the Lord Jesus Himself not only spoke of our great adversary by this title, but plainly recognized his delegated authority in that He did not dispute his right to the disposal of the kingdoms of this world and their glory (Luke 4:6-8). Moreover, how else can one understand the passage in Jude wherein Michael, the Arch-angel of God, is seen rendering to Satan the respect due to one supe-

rior in rank, even though that authority was then held in the hands of one who had become so wicked:

"Yet Michael the archangel, when contending with the devil he disputed about the body of Moses, durst (dared) not bring against him a railing accusation, but said, The Lord rebuke thee." (Jude 1:9)

THE FALLEN ANGELS

Also, Satan is called the Prince of the Power of the Air (Eph. 2:2). The word here translated air would be better rendered Heavens. This would seem to be the same as the heavenly places which the NASB, the NKJV and the KJV version render "high places" (Eph. 6:12) and which, as Paul indicates, swarm with the spiritual hosts of the wicked. As Pember* has written:

"What, then, is the nature of the power indicated by these titles of Satan? To understand it we must glance at the general hints of Scripture concerning spiritual agencies. For, though unseen and little suspected by the rulers of earth, they are also spiritual powers (Eccls. 5:8), all origi-nally appointed by God, whether they be now loyal to Him or not. Rank above rank these watchers stand, each passing on his account to a superior until it reaches the Most high at the apex of the pyramid. So in Zechariah's first vision, those whom the Lord had sent to walk to and fro upon the earth are represented as delivering their report to the Angel of the Lord, who then appeals to the Almighty Himself." (Zech. 1:11-12)

"And hence we read of thrones, dominions, principalities, powers (Col. 1:16), archangels, and angels. Nor can we know much of Scripture without discovering that vast numbers of these invisible beings, who supervise the affairs of men and their world, are in open rebellion against the Almighty; that there are principalities, powers, and world-rulers of darkness, with whom, as Paul tells us, we have to wage a fearful warfare (Eph. 6:12). These all render account to Satan, their Prince, who, in his reports to the Most High, makes use of their intelligence to accuse ourselves and our brethren before God day and night." (Rev. 12:10).[2]

But there is something more which we must see -note carefully the place where Satan accuses us "day and night!" It is not in the depths of the earth, but in the heavens - and even more, before the very throne of God Himself! (Rev. 12:10) This is substantiated in the Book of Job:

"Now there was a day when the sons [angels] of God came to present themselves before the Lord, and Satan also came among them." (Job 1:6) (cf. Job 2:1 and Rev. 12:10)

Satan is not in the depths of the earth, but rather he is continually in heaven before the throne of God "day and night" accusing us before the Father! And not only is our great antagonist in heaven, but also his hosts - one third of the angels of heaven (Rev. 12:4). If it was not for the Son, who also appears continually at the throne as our great high priest (Heb. 8:1) with His own precious blood as an offering for our sin, we would have surely perished as a race long ago. From all this, we can easily comprehend that although Satan is a rebel, he has not as yet been deprived of his titles, his power, and this is very important - his place in heaven; and this is as true of the angels who joined him in his ancient rebellion as it is of Satan himself. He is still the great "High One on

High" (Isa. 24:21) who, as Pember suggests, divides the world into provinces according to nationalities, appointing powerful angels over each kingdom [such as the Prince of Persia and the Prince of Grecia - see Daniel]. And so we at last get some idea as to what Paul meant when he said that our battle was not with "flesh and blood," but it was instead with "principalities," with "powers," with the "world rulers of this darkness," and with "spiritual hosts of wickedness in the heavenly places" (Eph. 6:12).

THE DEMONS

And not only this, but man has another class of evil agents with which to contend, and while this second class of Satan's ministers have not the dominion and authority of the "high ones on high," they are, nonetheless, countless in number and their potential for harm almost as great - we speak here, of course, of the demons or "devils" of the New Testament. Their home is not the heavens on high, but the earth here below; and they do not share the attributes and power of the angels, but are instead the disembodied spirits of those who trod the earth in the flesh before the ruin described in the second verse of Genesis, and who, at the time of that great destruction, were DISEMBODIED by God, and left still under the power of their great leader in whose sin they shared. [Please see Pember's classic work, Earth's Earliest Ages for further study in these matters.]

As a result, these demons suffer a wearisome lack of ease, a wandering unrest, arising from a sense of incompleteness because of their disembodied state. They long to be clothed with flesh again, and so great is their craving that if they can satisfy it in no other way, they will even enter into the filthy bodies of swine (Matt. 8:31). Indeed, it is they, and not the evil angels, who - in their uncontrollable and insatiable desire to be clothed with flesh again - are responsible for the "possessions" described by the Scriptures. They long to "feel" again, if only pain, and this is the reason that many possessed persons inflict pain on themselves, for it is not they, but the demons which have entered them, who are responsible.

THE GULF BETWEEN THE TWO WORLDS

That the human race has not been totally subjected and submerged by these evil dignities on high and by the demons here below is only because of the gulf, perhaps the better word is the secular term "dimension," which God has fixed between them and us. For who could know the viciousness of their sin, the depths of their immorality, the vile power of their hateful lusts. And though they can appear as angles of light, they inhabit the halls of darkness, and their home is the blackness of night forever.

THE DAYS OF NOAH

However, as we intimated above, this dimension has, from time to time, been pierced and broken through. And when this has occurred, the result to man has been one of unparalleled disaster and moral collapse; indeed, it was precisely this that brought on the monstrous magnification of wickedness and sexual depravity in the days of Noah which eventually led to God's judgment in the Flood. This is detailed in some of the darkest, most enigmatic passages of Scripture contained in the Bible - and we do well to note them carefully. Genesis, chapter 6 says:

"Now it came about, when men began to multiply on the face of the land, and daughters were born to them,

"That the sons of God [lit., "Elohim," meaning angels - in this case, wicked angels] saw that the daughters of men were beautiful; and they took wives for themselves [i.e., had sexual intercourse with] whomever they chose ... The Nephilim [lit., the fallen ones, meaning the offspring of the sexual union between the daughters of men and the angels of Satan] were on the earth in those days, and also after-ward, when the sons of God [angels] came into the daughters of men [i.e., had sexual in-tercourse with them], and they bore children to them. Those were the mighty men who were of old [in Greek mythology], men of renown.*[see footnote previous page -i.e., pg. 70] ... Then the Lord saw that the wickedness of man was great on the earth [as a result of man's intercourse with the angels of Satan], and that every in-tent of the thoughts of his heart was only evil continually ... And the Lord was sorry that He had made man on the earth, and He was grieved in His heart. And the Lord said, 'I will blot out man whom ... for I am sorry that I have made them'." (Genesis 6:1-2,4-7)

Pember writes concerning this:

"Now, in speaking of the sin of some of these, Jude (Jude 6) tells us that, despising the position of dignity and responsibility in which God had placed them, they voluntarily left their own home [or, disrobed themselves of the spiritual body proper to them as beings of heaven, and materialized for themselves an earth-body; for the word used here in the only other place in the New Testament means the heavenly body with which the believer longs to be clothed] in the ... [heavens], prompted as it would seem by earthward desires [for the daughters of men], and began to exercise an unlawful influence over the human race [which led eventually to the great increase of wickedness - far beyond what is even known today]. And, perhaps, as a punishment, their [i.e. that special class of Satan's angels which involved themselves in this specific crime] return [to heaven] was prohibited." [3]

Pember goes on to say:

"The children of these unlawful connections before the flood were the renowned heroes of old: the subsequent repetition of the crime doubtless gave rise to the countless legends of the Classics [of Greek mythology], as well as in the ancient literature of other languages, in which human families are traced to a half-divine origin." [4]

So heinous was their crime in the sight of God [that is, the unlawful sexual union between men and angels], that He destroyed man in the Flood and dashed the angels responsible to the lowest pit - for Peter tells us that after they [the angels] had sinned, God spared them not -

"... but cast them into hell and committed them to pits of darkness, reserved for judgment ..." (II Peter 2:4)

Pember writes concerning this passage:

"... a more literal rendering (of this passage) would be ... 'For if God spared not angels when they sinned, but cast them down to Tartarus, and committed them to pits of darkness, to be reserved to judgment' ... Tartarus appears to be a place of imprisonment more terrible than Hades ... In the Greek mythology, Tartarus was a dark abode of woe, as far beneath Hades as Earth is below Heaven (Homer II. viii. 16) - a description which fairly corresponds to Peter's 'pits of darkness'. Very significant, too, is the fact that it was

thought to be the prison of Cronos (i.e., Kronos) and the rebel Titans [the beings who in Greek mythology were respon-sible for exactly the same crime as described by Genesis 6]." [5]

THE APPEARANCE OF THE FALLEN ANGELS

The foundations of human society before the Flood were destroyed by the appearance of the fallen angels. The eruption of these beings upon the earth led to the total corruption of the human race - so much so that it was beyond remedy. The fallen angels had burst the bands that had separated them from humanity. The gulf or dimension that God had placed between men and angels had been bridged, and now these malignant beings poured into the earth like a torrent into an empty lake bed. Violence and blood-shed filled the earth. Slaughter and rampage were everywhere. And if man had been sullied before by the taint of sin, he descended now into a state of abject disgust and abhorrence a thousand times worse than his condition before the poisonous infestation of his world by these malicious beings.

There appears to be but one other occurrence of this sin after the Flood: the assertion is made in Numbers 13:33 in reference to the sons of Anak, who are said to have been Nephilim (the word translated "giants" in the KJV in these verses is Nephilim). These were the Canaanites who so frightened ten of the twelve spies that Moses sent into Canaan after the Exodus to spy out the land; it seems to account for God's command that the whole race of the Canaanites should be extirpated or annihilated. The thought here is that the Canaanites should be removed much like a doctor would excise or amputate a cancerous leg from a man to preserve the rest of the body from the spread of the malignancy.

THE COMING REAPPEARANCE OF THE FALLEN ANGELS

Now, it has not been without cause that we have taken the time to delve into these Biblical references with regard to the supernatural - for as interesting as all of this is in and of itself, there is here a very somber and earnest reason indeed. And that is this: the gulf that has so long separated man form the fallen angels [and has preserved him from the depths of sin to which his fathers fell before the Flood] will be bridged once again, the bands broken, and the fallen angels - like a flood that has burst its boundaries - will inundate the earth once again as in the days of Noah. This then is the reason for the awful declaration:

"For the coming of the Son of Man will be just like the days of Noah." (Matt. 24:37)

The cause, then, of the unfathomable evil, wickedness, violence, and depraved sexual sin which will so devastatingly characterize the Great Tribulation of the second half of the Seventieth Week will be the shattering of the barrier which God has erected between man and the Kingdom of Darkness. Pember writes:

"... the future ... [fall] of the angels of darkness to earth will be the proximate cause of the GREAT REBELLION [i.e. the GREAT TRIBULATION] which will call forth the Lord Jesus in flaming fire to take vengeance." (Rev. 12:13). [6]

THE MYSTERY OF THE SEVEN TRUMPETS

With all this in mind, let us now return to the mystery of the Seven Trumpets. Note carefully the salient feature of the first four trumpets. All the plagues have their origin in

the heavens! Like a flood, these beings - extraterrestrials, if you wish -pour onto the earth after their expulsion from the heavens. And the result? The plagues of the first four trumpets. The Bible compares their entrance into our atmosphere as follows:

- * The First Trumpet: hail and fire mingled with blood.
- * The Second Trumpet: a great mountain burning with fire cast into the sea.
- * The Third Trumpet: a great burning star from heaven cast onto the earth and the name of the star is Wormwood.
 - * The Fourth Trumpet: the sun, moon, and stars smitten.

Can anyone reasonably assume that literal stars will be cast onto the earth? No, of course not. The stars are the fallen angels and relate directly to Revelation 12:4, 12:8-9, and 12:12:

"And his [Satan's (i.e., the dragon's)] tail swept away a third of the STARS (i.e., angels) of heaven, AND THREW THEM TO THE EARTH ... and there was no longer a place found for them [i. e., the Devil and the fallen angels] in heaven. And the great dragon was thrown down [cast out of heaven], the serpent of old who is called the devil and Satan who deceives the whole world; he was thrown down to the earth, and his angels were thrown down with him ... WOE TO THE EARTH AND THE SEA, BECAUSE THE DEVIL HAS COME DOWN TO YOU, HAVING GREAT WRATH, KNOWING THAT HE HAS ONLY A SHORT TIME."

There can be no doubt that the celestial bodies which are here seen crashing onto the earth are fallen angels. This is not only substantiated in the verse itself, but also by the prominence of the fraction: ONE-THIRD. THIS FRACTION RELATES DIRECTLY TO THE FALLEN ANGELS - one-third of whom rebelled against God and joined Satan in his insurrection (Rev. 12:4). [It should be noted here that God evidently set limits to the insurrection, those limits being a third of His dominions and no more.]

And woe unto those who in their ignorance and stupidity had looked to welcome these celestial beings, for "... the name of the star is called WORMWOOD ... " (Rev. 8:11) What does this mean? Wormwood is hemlock, and is an extremely poisonous root. It is bitter and evil tasting, and is used throughout the Scriptures as a curse - especially in reference to SEXUAL SIN (Proverbs 5:4) and SPIRITUAL FORNICATION (Deut. 29:18, Jer. 9:15, 23:15, Lam. 3:15, 19). Spiritual fornication and sexual sin - these are the sins in which the fallen angels involved themselves and which brought on the Flood (Genesis 6). And the judgment and curse of God against them was great indeed:

"... wandering stars [... (these) angels who did not keep their own domain, but abandoned their proper abode, He has kept in eternal bonds under darkness for the judgment of the great day (Jude 6)], for whom the black darkness has been reserved forever." (Jude 13)

And once again, as in the days before the Flood, they will involve themselves in these same ancient sins - sexual intercourse with the daughters of men [producing Nephilim]; and, again as before, they will demand to be worshipped as gods [as they so demanded prior to the Flood and as depicted in the stories of mythology of the Ancient World].

All this, of course, has special reference to the character of the second half of the

Seventieth Week wherein Satan in the guise of Antichrist will enter the Temple of God, and demand to be worshipped as God:

"Let no one in any way deceive you, for it will not come unless the apostasy comes first, and the man of lawlessness is revealed, the son of destruction,

"who opposes and exalts himself above every so-called god or object of worship, so that he takes his seat in the temple of God, displaying himself as being God." (II Thess. 2:3-4)

What is the result to man in all of this? It will be the same as before the flood, the sudden and violent increase of immorality, wickedness and human depravity beyond all previous bounds [surpassing evidently even the bounds set by the sin which produced the Flood], producing bloodshed, rampage, savagery and tumult on an unheard of scale! - so much so that:

"... except those days should be shortened, there should no flesh be saved ..." (Matt. 24:22)

THE FIFTH TRUMPET

But wait, there is more, much more:

"And the fifth angel sounded, and I saw a star from heaven which had fallen to the earth; and the key of the bottomless pit was given to him.

"And he opened the bottomless pit; and smoke went up out of the pit, like the smoke of a great furnace; and the sun and the air were darkened by the smoke of the pit.

"And out of the smoke came forth locusts upon the earth; and power was given them as the scorpions of the earth have power.

"And they were told that they should not hurt the grass of the earth, nor any green thing, nor any tree, but only the men who do not have the seal of God on their foreheads.

"And they were not permitted to kill anyone, but to torment for five months; and their torment was like the torment of a scorpion when it stings a man.

"And in those days men will seek death and will not find it; and they will long to die and death flees from them.

"And the appearance of the locusts was like horses prepared for battle; and on their heads, as it were, crowns like gold, and their faces were like the faces of men.

"And they had hair like the hair of women, and their teeth were like the teeth of lions.

"And they had breastplates like breastplates of iron; and the sound of their wings was like the sound of chariots, of many horses rushing to battle.

"And they have tails like scorpions, and stings; and in their tails is their power to hurt men for five months.

"They have as king over them, the angel of the abyss; his name in Hebrew is Abaddon, and in the Greek he has the name Apollyon (i.e., Apollos)." (Revelation 9:1-11)

These verses are rendered more intelligible in the Concordant Literal Translation of the New Testament:

"And the fifth messenger trumpets. And I perceived a star fallen into earth. And to him [the star or fallen angel] was given the key of the well of SUBMERGED CHAOS. And he opens the well of the submerged chaos, and fumes ascend out of the well as the smoke

of a large furnace, and the sound and the air are darkened by the fumes of the well. And out of the fumes came out locusts into the earth, and license was granted them as the scorpions of the earth have license. And it was declared to them that they should not be injuring the grass of the earth, not any green thing, nor any tree, except those of mankind who have not the seal of God on their foreheads. And it was granted to them, not that they should be killing them, but that they shall be tormented five months; and their torment is as the torment of a scorpion, whenever he should be striking a man. And in those days men will be seeking death, AND UNDER NO CIRCUMSTANCES SHALL BE FINDING IT. And they will be yearning to die, and death is fleeing from them. And the likeness of the locusts are like horses ready for battle, and on their heads are as it were wreaths like gold, and their faces are as it were human faces. And they had hair as the hair of women, and their teeth are as if they were lions. And they had cuirasses [body armor], as it were cuirasses of iron, and the sound of their wings is as the sound of many chariot horses racing into battle. And they have tails like scorpions, and stings, and their license is to injure mankind five months with their tails. They have a king over them - the messenger of the submerged chaos. His Hebrew name is Abaddon, and in Greek he has the name Apollyon (i.e., Apollos)."

Apollyon (Apollos - Rev. 9:11) in Greek mythology was the god of the heavens [the sun]. This is precisely the same personage referred to in verse 9:1:

" ... and I saw a star [fallen angel] from heaven which had fallen to the earth; and the key of the bottomless pit was given to him ... "

This is the same star that Revelation 8:9-11 refers to as "Wormwood ..."

"... and a great star fell from heaven burning like a torch, ... and the name of the star is called Wormwood; ... (Rev. 8:9-10)."

It is also that great personage referred to in Revelation 12:9 as "... the great dragon ... that serpent of old called the Devil and Satan ..."

"And the great dragon was cast out, that old serpent called the Devil and Satan, which deceiveth the whole world: he was cast out into the earth ... And to him, was given the keys of the bottomless pit, and he was given permission by God to free the hosts of hell [the demons or disembodied spirits]."

They are told not to hurt the grass or the earth in any way. THIS JUDGMENT IS ON THE SPIRIT OF MAN AND IS THE DIRECT RESULT OF THE ABOMINATION OF DESOLATION; only those who have been sealed by God are to be spared. Revelation 9:5 says that they are not permitted to kill anyone, but to torment man for five months; and their torment is to be like the sting of a scorpion. In those days men will seek death and not find it - for the torment is spiritual and not physical! The prohibition [or protection] of God has been lifted from man's spirit.

This is no "common" possession [such as occurs today in instances of demon possession], THIS IS SPIRITUAL POSSESSION - TOTAL POSSESSION! Man is possessed totally by the demons - body, soul, AND SPIRIT!! They [men] are driven no longer by their own desires, but by the irresistible force of Satan's denizens. There is no longer any choice for them. The hater of humanity is now in total control - body, soul, and spirit. The possession is complete. The domination of man by the hosts of hell is now total.

These citizens of hell are described as horses prepared for battle - their strength cannot be contended. They are bent on the destruction of mankind. On their heads are crowns of gold [a counterfeit of the Holy Spirit], and their faces are like the faces of men [i.e. the men they possess]. They have hair like the hair of women [i.e., their hair is long and unkempt - they have been whipped into a frenzy]. Their breastplates are like iron and the sound of their wings is as the sound of countless war chariots - they are invincible.

According to legend, nearly three and a half thousand years ago, one of the sons of the Egyptian Pharaoh Amenophis II was out hunting near a plateau some ten miles from Cairo. Tired from his endeavors, the Prince Thutmose rested in the shadow of a mysterious head protruding from the desert sands.

Thutmose duly fell asleep and, in a dream, heard the carved stone head whispering to him that one day he would become ruler of all Egypt ahead of his older brothers. The prince was also told that he would then free the body of the forgotten god from the desert sands where it had lain buried for centuries. Thutmose awoke refreshed, and, recalling the dream silently committed himself to clearing away the sands, intrigued that as a younger son, he could possibly become Pharaoh. He then left to continue his hunting.

On the death of his father the prophecy become true, with the former hunter ascending the throne as Pharaoh Tuthmosis IV. Shortly afterwards the Pharaoh, who was only to reign for eight years (1413-1405BCE), honored the pledge made as a younger man and cleared the area around the Sphinx revealing the God in its true magnificence. (1)

This enigmatic clue to the existence of a lost people and world was supposedly constructed during the lifetime of the Pharaoh Chephren around 2550 BC (2). However there is no actual evidence to support this dating; the link with Chephren has been assumed given that the Sphinx shares the Giza plateau with the pyramids of which the greatest was believed to have been built by Chephren. It was also believed that the 'face' of the Sphinx depicted Chephren himself.

However over two thousand years later in the 1940s suggestions were being made that the Sphinx may well be much older than that, possibly by thousands of years. The first to propose this was the French scholar Rene Schwaller de Lubicz (1891-1962).

Schwaller had moved to Egypt in 1936 and had stayed there for 15 years studying the temples, particularly the Temple of Luxor. His initial research was published in 1949 and a fuller account of his findings was published in 1957. (3) During Schwaller's time in Egypt he also examined the Sphinx and noted that it was badly eroded. Whilst this was not a new observation, Schwaller's conclusion was; for he believed that the erosion had not been as a result of the wind (which would have cut sharp, straight patterns into sediment layers), but from water. He pointed out that the erosion on the Sphinx was clearly the rounded and furrowed contours typical of water erosion.

The implications of Schwaller's observations were not immediately realized, for data regarding rainfall in Ancient Egypt was not widely available at that time. However, it is now known that Egypt experienced torrential rainfall, with some interruptions, from about 10,000 to 5000 BCE. This rain came to a complete end by the middle of the third millennium. (3)

This meant that if the erosion on the Sphinx was indeed as a result of water rather than wind, then the Sphinx must have been carved at least two and a half thousand years before it's accepted date, possibly even much longer if weathered for thousands of years. The inevitable conclusion from this was startling; the construction of the Sphinx predated the Egyptian civilization by thousands of years. Perhaps understandably, orthodox archaeologists and Egyptologists refused to even consider Schwaller's hypothesis.

His work then languished in relative academic obscurity until it came to the attention of independent Egyptologist John West who later published his own book 'Serpent In the Sky: the High Wisdom of Ancient Egypt' (5). After rigorous examination, West agreed with many of Schwaller's earlier findings and concluded that the Sphinx did indeed predate Egyptian civilization.

Such confirmation again threatened to cast accepted world history into confusion, but this time its proponent was not to be easily dismissed. West was fully aware that world history as we know it centres on the Egyptian culture being founded around 3000 BCE. So the question was again raised. If the early Egyptians had not built the Sphinx, then clearly some other peoples had. And not only had someone else built the Sphinx, but they had done so thousands of years before there should have been a people civilized enough to undertake the task and there was certainly no obvious evidence that such a people had existed. Inevitably this was all too much to bear and West's work was also consigned to the 'best left alone' fringe and considered little more in academic circles as had Schwaller's work earlier in the century.

But West wasn't prepared to be dismissed so easily. By the 1980s he had interested a respected geologist from the University of Boston, a Dr. Robert Schoch. Schoch was a highly respected stratigrapher (a geologist who studies layers of rock) and paleontologist and author of four published books.

Schoch explains his involvement. "I grudgingly got involved in the whole controversy as a favor to a couple of fellow academics at Boston. I was persuaded to get involved by Robert Eddy, Professor of Rhetoric at Boston, and an old friend of West. I was told West wanted an 'open minded' geologist to help explore his theory. I heard West out, but did not think there was much chance he was correct in suggesting that the Sphinx was older than its standard attribution – until I got to Egypt." (6)

Schoch carried out a clinical assessment of West's claims and was mindful of suggestions that if the erosion was indeed caused by water, then this could be attributed to more recent flooding of the Nile, and therefore no earlier redating was required. When looking for evidence of this, however, Schoch noticed that the erosion was heaviest on the upper parts of the Sphinx and enclosure walls and not around the base where flooding should have undercut the monument. He therefore concluded in June 1990 that the erosion had indeed been caused by the weathering of rain over thousands of years rather than by wind erosion or flooding. He later published these findings. (7)

On 23rd October 1991, Schoch presented his material to the Geological Society of America, where it was grudgingly accepted rather than embraced (8). However the academic world was not totally convinced with one scholar, Carol Redmount of the University of California, claiming it undermined "everything we know about ancient Egypt" (9) and another, Peter Lacovara, assistant curator of the Egyptian Department of the Boston

Museum of Fine Arts, muting "there are no big surprises in store for us". (10) He wasn't ready to believe that the Sphinx predated the Egyptian civilization.

Despite these reservations, it appeared proved beyond doubt that the erosion had been caused by water and rainfall rather than flooding. But then another tenacious scholar waded in with a different agenda.

Mark Lehner, of the Oriental Institute at the University of Chicago, had been investigating the Sphinx since 1980. He was dismissive of Schoch's estimate that the Sphinx had been built around 7000BC, possibly earlier.

Ironically, Lehner's interest in ancient Egypt and the Sphinx originated from his connection with the Association for Research and Enlightenment (ARE - The Edgar Cayce Foundation) which expounded theories of the lost civilization of Atlantis. Indeed, Lehner had written a book 'The Egyptian Heritage based on the Edgar Cayce Readings' (11). He openly admitted, "it's no secret that when I went [to Egypt] I myself was imbued with the idea of lost civilizations.... So I was in fact ... looking for the lost civilization and something called the Hall of Records."

However, after his own exhaustive research, Lehner concluded there was no connection between Ancient Egypt and any lost civilization and he wasn't prepared to have a youthful Schoch claim otherwise. Lehner's first objection to Schoch and West's claims was if an earlier civilization had built the Sphinx, where was the evidence of it's existence? In his opinion it was nowhere to be found. Secondly, Lehner implied that Schoch was incompetent as a geologist. "I don't think he has done his geological work yet ... one of the primary pillars of his case is that if you compare the Sphinx to the Old Kingdom tombs, they don't share the same weathering, therefore the Sphinx must be older, but he's comparing layers in the Sphinx to other layers." (12)

Lehner was alleging that the 'Sphinx layers' ran under the tombs, so the tombs are made of different limestone, by implication harder, and should therefore have weathered much more slowly. If correct, this would have destroyed Schoch's case – and along with it any need to account for what peoples had built the Sphinx before the Egyptians.

The British Broadcasting Corporation (BBC) then entered the fray. They were preparing a television program to show West's theory based on Schoch's evidence. It was important for them to establish who was right, Schoch or Lehner, as the corporation was anxious not to show a potentially flawed documentary that could damage its integrity and worldwide reputation fort serious and informed reporting. They therefore hired an independent expert to give a professional opinion on who was right. The outcome was beyond doubt; the tombs were made of the same flaky limestone as the Sphinx. Schoch and West were correct and Lehner's counter arguments had been dealt a body, but not a knockout, blow.

Lehner countered by arguing that the face of the Sphinx was in fact the same as that of an undamaged statue of Chephren (d. 2533BC). He published an article in the April 1991 issue of National Geographic in which he described using computer graphics to assist in this task. "We have constructed images of the Sphinx as it may have looked thousands of years ago. To create the face, I tried matching views of other sphinxes and pharaohs to our model. With the face of Khafre [Chephren], the Sphinx came alive." (13)

Not so, West countered, stating that the two faces actually looked nothing like each other. West decided to approach Detective Sgt. Frank Domingo, a senior forensic police artist with the New York Police Department who had joined the ranks in 1966 for an informed opinion (14). Domingo had gained an impressive reputation in facial reconstructions to the extent that archaeologists and historians regularly sought out and used his services.

He was asked whether he was prepared to travel to Giza to clarify whether or not the Sphinx was actually Chefren. "What if I decide it is Chephren?" He asked. "If that's what you come up with, that's what I'll publish." West replied. (15)

Domingo duly visited Cairo and took many photographs of the Sphinx and the statue of Chephren housed in the Cairo museum. He concluded that the chin of the Sphinx is far more prominent than that of Chephren, and more importantly, that a line drawn from the ear to the corner of the Sphinx's mouth sloped at an angle of 32 degrees. The same line drawn on Chephren is only 14 degrees. This along with other dissimilarities led Domingo to conclude that the Sphinx is definitely not a portrait of Chephren (16). Given that it is clearly not Chephren, who then might it may actually be? We will never know for certain but perhaps a clue lies in the overall shape of the Sphinx. Even a casual glance at the sculpture shows that the Sphinx's head is badly out of proportion with the rest of its body. Some researchers have suggested that the original head was much larger and could possibly have been that of a lion. This would certainly make sense for the rest of the Sphinx's body appears to be that of a lion. Why then recarve the sculpture? Again, speculation, but we do know that the body of the 'lion' has spent most of its existence under the sand. In all probability those, like Tuthmosis, rediscovering the Sphinx in the age of the Pharaohs, only came across its head, perhaps in a poor state of repair and so recarved it to represent the new age.

Even though Domingo had demonstrated that the Sphinx was not a portrait of Chephren (apparently destroying Lehner's last argument), the matter did not rest. The American Association for the Advancement of Science scheduled a session to debate the issue at its annual general meeting in Chicago on 7th February 1992. Lehner attended along with geologist K. Lal Gauri of the University of Louisville, who had also studied the Sphinx for many years. West also attended and presented his arguments. (17)

Once again, the water erosion findings were endorsed even though Egyptologists themselves could not bring themselves to accept the implications of this endorsement. The AAAS meeting broke up in words that, according to the New York Times "skated on the icy edge of scientific politeness" (18)

Schoch was taken aback by the strength of feeling regarding his claims, which he considered were based on science rather than a belief in some form of Egyptian 'Order.' "When I first became interested in the dating of the Sphinx," he commented, "a friend who had lived in Egypt for several years warned me that I might run into such hostility. At first I was incredulous, but now I tend to think he may have been correct." (19)

Schoch, of course, was not the first scientist to run foul of Egyptologists. As Germer wrote in 1986, "In the past, cooperation between the natural sciences and Egyptology has not necessarily been successful in every case. The Egyptologist is initially suspicious; he often rejects out of hand, and is unwilling to work with scientific data. He be-

lieves that he can do better with his own methodology." (20)

After the controversy subsided, West spent the next eighteen months producing a documentary for television that attracted thirty million viewers when it aired in the United States on 10th November 1993. (Broadcast on the NBC network at 9:00 PM EST. The documentary won a 1993 Emmy award for Best Research and a nomination for Best Documentary.)

Although the arguments did not stop entirely, with papers still being issued on a regular basis, it does appear that West and Schoch had won the academic debate that the Sphinx should be redated to a much earlier age. (21)

So if the monument was constructed before the Egyptian civilization, who did build it, and who were they? This is the one major argument against the earlier dating that Schoch cannot answer, however he does not see it as his problem to answer; he is a geologist not an historian. He rightly sees that as a problem for others.

It seems obvious to look for clues as to who these lost people were on the Giza plateau itself. Yet the area had been overrun with researchers, robbers and excavators for hundreds of years so presumably nothing new could now turn up. However geologists have recently developed a technique that could lead to previously hidden features being discovered.

This 'new' method is used by geologists for studying deeper layers of rock. A metal plate is struck with a sledgehammer; the vibrations go down through the rock and are reflected back by various strata. These echoes are then picked up by 'geophones' placed at intervals along the ground and a computer later interprets their data. (22)

Using this method, John West's geophysicist, Thomas L. Dobecki, noted that under the front paws of the Sphinx there appeared to be some form of underground chamber, possibly more than one. This aroused considerable excitement for legend has it that chambers under the Sphinx hold ancient secrets.

So what did the Giza Plateau authorities do with this information? They immediately announced that further excavations would be delayed, not by months but for years. However, perhaps not too much should be read into this. An early photograph taken in 1926 showed a man standing at the entrance to a passageway leading into the Sphinx, although there is no record of any findings and the entrance was subsequently sealed with new blocks. Another passage found in 1987 yielded no more than some shoes and an early 20th Century newspaper. (23) Yet the knowledge that the Sphinx actually does contain secret passages and chambers means that at some point in the future we may discover clues to a hidden past.

One outcome of the Schoch and West investigation and the inevitable conclusion that a forgotten people predating the ancient Egyptians had built the Sphinx, was to refocus attention on the Pyramids for it seemed unlikely that the giant statue would have been constructed in isolation, indeed the monument almost appears to be protecting the Giza plateau. Perhaps, then, the pyramids could provide some clues about the lost people who had constructed the Sphinx and then disappeared from history.

Since the time of the classical Greeks people have gazed at the Great Pyramid, the sole survivor of the ancient world's seven wonders, and wondered about it's mysterious

past.

Apparently built on the edge of known history, unanswered questions have been asked about who built it, and how could man, in antiquity, have the skills for its construction. We are told the pyramid was built as a tomb for Chephren around 2575 years BCE. Situated ten miles west of Cairo, the pyramid covers a ground area of 13.1 acres and was built with over 2.3 million limestone blocks each averaging two and a half tons each. Some idea of the enormity of the structure is revealed when it is noted that the pyramid contains enough stone to build a wall of foot-square cubes, two thirds around the Earth at its equator – some 16,600 miles.

We know those who constructed the Great Pyramid were competent builders and mathematicians for the structure is aligned to the cardinal compass points to within one twelfth of a degree and the thirteen acre base area is level to within a fraction of an inch. The pyramid also lies on the longest land-contact meridian on the Earth's surface and at the geographical centre of Earth's land mass, including the then supposedly unknown Americas and Antarctica.

The design also appears to have incorporated advanced mathematical and astronomical knowledge far in advance of that belonging to any known civilization. The four slightly hollow faces climb to an angle of 51° 51' 14.3" to a summit platform. The apex is missing, however by projection to the theoretical apex; the angle of slope gives a relationship of the pyramid's height to the perimeter of is designed base equal to the radius of a circle to its circumference. In case you didn't follow that, if you divide the distance around the base of the pyramid by its height, the product is _ , a measurement that should not have been known to ancient man.

There are other mathematical marvels. Of several units of measurement, the Sacred Cubit (25.0265 inches, one ten-millionth of the mean polar radius of the Earth as determined during the International Geophysical Year 1957-8) is found in multiples establishing the pyramid as a textbook of geophysical and astronomical data. The side of the designed base square measures 365.242 Sacred Cubits – the exact number of days in the solar year. Other measurements derived from the 'hollowing-in' of the sides as established in the 1920s by Leeds engineer David Davidson accurately represent sidereal (365.256) and anomalistic (365.259) years. The pyramid or primitive inch (1.00106 inches: 1/25th of the Sacred Cubit) is also implicated in the repetition of specific values. Measurements of exactly 365.242"P are found in the King's Chamber complex.

Whatever its past, the Great Pyramid kept it secrets on the great Giza Plateau for millennia until the ninth-Century Arab Caliph, Abdullah Al Mamum undertook to investigate it after he had heard that the pyramid contained secret chambers full of highly accurate ancient maps of the world and other astronomical charts and tables.

With a team of architects, builders and stonemasons, the Caliph set off in the year now known to Westerners as AD820 to enter the giant structure for the first time in thousands of years. It soon became obvious why they were in fact the first adventurers up to that time to enter the pyramid, for they were unable to find an entrance to the structure. Eventually they hit upon the idea of heating the limestone blocks then dowsing them in cold vinegar until they cracked. Using this painfully slow method they managed to burrow through 100 feet of solid rock until reaching a narrow, four-foot high passage that

climbed steeply upwards.

At the top end of this passageway they discovered the pyramid's original entrance, forty-nine feet above the ground. They then followed the passageway downwards. Eventually after a slow descent into the unknown, they found a chamber. An empty chamber.

The men explored around in the eerie darkness; convinced that there must be other chambers or passageway - for surely the structure had not been built only to leave it empty?

Sometime later, Al Mamun's men returned with news. They had discovered what appeared to be another corridor, this time sloping upwards. However, if it was a corridor, possibly leading to a room full of lost knowledge and riches, then its mystery was to remain, for the corridor was blocked by a gigantic granite plug, barring them from proceeding further.

The men then attacked the granite with hammer and chisels, however the block proved to be too strong. Disillusioned and frustrated they rested, before realizing that if they could not hack through the plug, then maybe they could chisel around it. And they did. And they found another plug. So they did the same thing again. And they found another plug. And then another.

Eventually they emerged exhausted into a low-ceilinged corridor that slanted upwards until it intersected with a level passageway. The men hoped that after all their efforts this passageway would lead them to their destiny – a hidden chamber full of lost knowledge and perhaps those craved-for riches. The passageway did lead to a chamber, but this chamber (later named the Queen's chamber) was also empty. The explorers were perplexed. Why go to all this trouble to house seemingly nothing? They continued to believe that somewhere in this giant structure, something must be hidden or buried and they were determined to find it.

The search continued with this time an increasing sense of excitement, for the explorers then discovered a corridor with walls of polished limestone twenty-eight feet high. They named this area the Great Gallery. It is easy to understand a feeling of mounting tension as they climbed a further 156 feet into the unknown before they discovered a vast chamber, thirty-four feet long, seventeen feet wide and nineteen feet high. They named this the King's chamber.

This chamber, lost for so many centuries, slowly began to reveal its secrets as the light of the men's torches cast a yellow glow on its walls. But far from being filled with great riches, the room appeared empty. But then, there, at the far wall, they could see a sarcophagus. A sarcophagus so large that the room was clearly built around it, and if the room, then perhaps the pyramid itself. The men moved tentatively forward and looked inside.

Nothing. No body and certainly no treasure. In a fury the explorers hacked into the floors and walls determined to find some recompense for their endeavors, but there was nothing; not only no treasure or knowledge, but mysteriously, no sign whatsoever that the room had ever been entered before their visit, for they were clearly the first to get by the huge stone plugs in the passageway, and there was no other apparent way in.

The men left the pyramid perplexed, mystified and dejected. Clearly some people

had gone to extraordinary lengths to build this complex and intriguing structure, with its shafts, blocks and chambers, yet there was apparently not a single clue as to why they had done so; not a name, body, writing or even a single hieroglyph etched on a wall to hint at the pyramid's purpose or function.

Following this first known foray, little is known of pyramid exploration until 1638 when a British mathematician, John Greaves visited Egypt. His contribution to the Great Pyramid enigma was the discovery of a narrow well that descended vertically from the bottom of the Grand Gallery. He concluded that this was probably an escape route for the builders after they had set in place the granite plugs that had caused Al Mamum so much frustration. Unfortunately Greaves' planned reconnaissance of the tunnel came to an abrupt end after only sixty feet; not because of any blockage or other secret, but because of the numbers of bats and the stench of their foul air.

Over the following centuries thousands visited the pyramids, curious and eager to seek out its secrets. Without realizing it, each and every one of those visitors contributed to the eventual discovery of another puzzle that continues to intrigue researchers: for each visitor left behind small traces of water vapor from breath and perspiration. The cumulative effect of these deposits over the centuries literally made the inside of the pyramid start dissolving. As the buildup continued, it became inevitable that unless something was done the structure itself would become unsafe. The task of finding a solution to this problem was given to the German Archaeological Institute.

The Institute appointed an engineer, Rudolf Gantenbrink, as a consultant to work on the problem. Gantenbrink's experience of robotics in both nuclear plants and undersea exploration, coupled with his amateur fascination with the pyramids made him an ideal choice for the job. He recognized that the solution to the immediate problem of humidity was to increase the airflow throughout the pyramid. As it was already known that the pyramid had a series of ducts throughout, Gantenbrink set about designing a robot that could travel up and down these ducts to make an evaluation of their condition from the inside. This would then inform what work would be required to clear the shafts from centuries of debris.

The robot explorer he invented he named 'Upuaut,' an ancient Egyptian word for 'Opener of the Way', and on completion of its work, heavy-duty fans were fitted to the ducts to blast fresh air into the pyramid thereby solving the water vapor problem.

Following on from the success of Upuaut, Gantenbrink went on to design 'Upuaut 2', a modified version of the original robot with its own traction system that would allow it to climb up and down the shafts unaided. Upuaut 2 also had headlights; a laser guidance system and a small video camera to send back pictures to a monitoring console. In due course the robot was lowered into the shafts to start its work.

Gantenbrink later sent a video of the second machine's journey to Robert Bauval, an author and long time investigator of the pyramids. Bauval takes up the story:

"I quickly put the [video] tape in and watched as the robot appeared outside the Great Pyramid. Rudolf [Gantenbrink] put the robot into the opening of the southern shaft in the Queen's Chamber and then guided it with the controls on a worktop inside the chamber. The robot began filming inside the shaft. Slowly and laboriously it climbed,

going upwards for about sixty-five meters before coming to a stop. In front of it, clearly visible, was what looked like a miniature portcullis slab, of the sort used by the Egyptians to seal off a burial chamber.

Attached to the slab, or sliding door, were two copper fittings, one of which was broken, a fragment of it lying on the floor of the shaft. This last part of the shaft was lined with polished Tura limestone, which as far as we know was used inside the pyramids only for lining chambers and was considered sacred by the pyramid builders. It could also be seen from the movement of the robot's laser beam that the slab at the end of the shaft was not fully in contact with the floor, but left a gap of about half a centimeter; there was a triangular chip removed from one corner, providing a tantalizing glimpse of a grooved channel and a dark recess beyond. Though not conclusive, the video evidence was that what we were looking at was a hatchway leading, perhaps, to some hidden chamber." (24)

The door was discovered on 22nd March 1993 and yet no further exploration of what may lie behind the door has been undertaken; indeed a week after the discovery Gantenbrink was told to pack up his robot and leave the site. The German Archaeological Institute denied there was anything mysterious about this. "The project was finished. The shafts had been explored and there was nothing further to do. The blocking stone that was found at the end of the shaft is very normal. All these shafts were originally blocked. It is the normal construction. It is not possible to open the blocking; the Egyptians would never allow it." (25)

Gantenbrink, however, did not agree and applied an engineer's perspective to the issue, citing the polished limestone noted by Bauval around the area of the door. This stone is found nowhere else in the 180 meters of shafts explored to date and suggested an upgrading to something grander, rather than abandonment of the shaft as Egyptologists propose. Gantenbrink also noted evidence of structural damage around the doorway (found no where else in any of the shafts) indicative of internal stress in the area, suggestive of a cavity, and this idea is supported by the stress relieving construction techniques deployed around the door; blocks laid vertically rather than horizontally. The door also appears to be free of mortar, whilst all the joints between the blocks forming the shaft are mortared. (26)

Gantenbrink does not speculate as to what may be found behind the door, only that it is a door. "I take an absolute neutral position," he stated, "it is a scientific process, and there is no need whatsoever to answer questions with speculation when these questions could be answered much more easily by continuing the research ... We have a device [ultrasonic] that would discover if there is a cavity behind the slab. It is nonsensical to make theories when we have the tools to discover the facts." (27)

Yet the Egyptian authorities did not want to know. The English language Egyptian Gazette of 20th April 1993, nearly a full month after the find, even claimed that the Upuaut robot had never even entered the shafts, 'German Scientist's claim a hoax' ran the headline (28) before the editor changed his mind and reinvented the story as a major find. Strangely, the director of the Giza plateau site, Dr Zahi Hawass was sacked at the same time as the find (although later reinstated) and Gantenbrink's scheduled meeting with the Egyptian Minister of Culture "never happened. A press conference was scheduled.

It never happened." (29)

Two months later, Dr Mohammed Ibrahim Bakr, the man responsible for sacking Hawass, was himself sacked, and on leaving, claimed that he had been brought down by an official 'Mafia' whose aim was to impede the archaeological work for their own purposes. (30)

Whatever was going on in the Egyptian administration was not resolving the mystery of the door found in the pyramid shaft. Gantenbrink reluctantly recognized by this time that he would be unable to progress with his desire to establish whether or not there is a concealed chamber in the Great Pyramid on his own. He therefore proposed that his robot be given to the Egyptian authorities and he would restrict his role to merely training an operator so that the Egyptians would remain in full control of the entire operation. In November 1994 Gantenbrink received a reply to this proposal from the Secretary-General of the Supreme Council of Antiquities, Dr Abdul Nour El-Din which read "Thanks for your offer to train the Egyptian technician ... unfortunately we are very busy for the time being, therefore we will postpone the matter." (30)

Yet again, the Egyptian authorities appeared to have failed to exploit opportunities available to them, but why? The answer is actually very simple, for any claims or information that might suggest that the Sphinx and the pyramids may predate the Egyptian civilization are seen as neocolonial attempts to rob the Egyptians of their heritage. This could not be allowed to happen, for not only would it undermine the Egyptian 'role' in world history, but potentially demoralize Egyptian society itself and have implications for current political masters and Egypt's financial infrastructure.

To date, then, nothing has been found inside the structures on the Giza plateau that throws any light on the missing civilization that constructed the Sphinx ... except perhaps some latter day findings by British explorer, Colonel Howard Vyse in 1837.

Vyse, in then typical British gunboat diplomacy style, started his exploration of the Great Pyramid by blasting his way through the rock above the King's Chamber. There he discovered four sealed chambers and allegedly found hieroglyphics painted in red on the walls, one of which included the name of Chephren, thus the later association. Indeed this is the only association between Chephren and the Great Pyramid.

Researcher Graham Hancock, however, casts down on the authenticity of the hieroglyphics noting that the hieroglyphic 'graffiti' was the only sign of Chephren's name found anywhere in the pyramid. Secondly, the graffiti was located in an obscure chamber where only Vyse had access, and lastly, several of the hieroglyphs were painted upside down and others were misspelled or written using bad grammar.

It became Hancock's contention that Vyse forged the hieroglyphics to justify the costs of his expedition, although this view finds little favor with Egyptologists.

Hancock and his coauthor Robert Bauval found even less favor with these Egyptologists with their later theory that not only was the Great Pyramid not associated with the Pharaoh Chephren, but the plans for the structure were drawn up eight thousand years before his reign.

This concept was born from events in November 1983 when Bauval, his wife and daughter, were camping in Saudi Arabia with friends. Bauval woke up at one o'clock one

morning and gazed at the stars for some time before being joined by his friend who attempted to explain to him how to use Orion's belt to find the rising point of Sirius. During his explanation, the friend advised Bauval "the three stars of Orion's Belt are not perfectly aligned. If you look carefully you will see that the smallest of them, the one at the top, is slightly offset to the east." (31) This of course was not a new observation.

What was new, or at least rediscovered, was that the three pyramids at Giza were similarly laid out on the Giza plateau.

And not only were the three pyramids laid out as though they formed part of Orion's belt, the whole area appeared to mirror the sky. Hancock established that other pyramids in Egypt were positioned as if part of Orion and the River Nile flowed through Egypt just as the Milky Way appears to flow across the night sky.

Despite this initial excitement however, Bauval and Hancock noted that the angle of Orion's belt did not exactly match the layout at Giza. Using a computer to reconstruct the positions of the stars in the sky over millennia, they found that the only time the stars on the belt of Orion perfectly matched the position of the pyramids was in 10,500BC.

In isolation, of course, this date could be dismissed as pure fantasy. However other scientific evidence has already confirmed that the Sphinx was carved thousands of years before its accepted date. The Sphinx also has a link to the date of 10,500BE: for it was then and only then that the giant structure faced its own image in the sky.

Convinced of a land-star connection, Hancock went on to establish whether the layout of other historic sites mirrored other constellations in the sky and he published his findings in a recent book 'Heaven's Mirror.' In this work Hancock attempts to demonstrate an "interface between ground and sky" at sites around the world and to also link these to the date 10,500BCE to support his theory that there was a now-lost civilization in existence at that time.

One site Hancock identified was at the temple of Angkor Wat in Cambodia.

Located in northwestern Cambodia, Angkor, the capital of the Ancient Khmer Empire was possibly founded around the Ninth Century AD by King Jayavarman II. However, the city reached its peak glory in the 12th Century under Kings Suryavarman II and Jayavarman VII. The most beautiful and most famous monument in the city, Angkor Wat, lies about one kilometer south of the Royal town of Angkor hom which was founded by Jayavarman VII. King Suryavarman II, who reigned between AD 1131 and 1150, dedicated the Temple of Angkor Wat to the Hindu God Vishnu. The Temple was constructed over a period of 30 years, and illustrates some of the most beautiful examples of Khmer and Hindu art.

Covering an area of about 81 hectares, the complex consists of five towers, which are presently shown on the Cambodian national flag. These towers are believed to represent the five peaks of Mount Meru, the Home of Gods and centre of the Hindu Universe. Angkor Wat features the longest continuous bas-relief in the world, which runs along the outer gallery walls, narrating stories from Hindu mythology. With the decline of the Ancient Khmer Empire, Angkor Wat was turned into a Buddhist Temple and was continuously maintained, which helped its preservation. In 1992, the UNESCO World Heritage Committee declared the monument, and the whole city of Angkor, a World

Heritage Site.

Hancock demonstrates that mathematics built into the structure of the temple proving that on the spring equinox, Angkor Wat would be aligned to the rising sun.

He also demonstrates that nearby temples, when connected by a line, appear to show the constellation Draco in the sky: just as the Giza pyramids appear to show Orion's belt in the night sky, so does Angkor Wat appear to show Draco.

However, when Hancock attempted to compare the layout at Angkor with the constellation of Draco in the sky at the time the temple was built, 1150AD, he found that Draco's positioning did not reflect the ground layout.

However by turning the clock back, he was able to find a time when the ground and sky layouts appeared to mirror one another. And the date at which this happened was the same as at Giza: 10,500BCE. Yet Hancock's assertions are ultimately unsatisfying.

He can provide no link between 10,500 years BCE and the construction at Angkor in 1150AD, albeit he makes a mild assertion that the current temples may have been constructed on more ancient sites.

Whilst Hancock is able to demonstrate with clarity the astronomical complexities of Angkor Wat, the same precision is simply not evident in the layout of the temples on the ground and the constellation of Draco in the sky.

There is, however, other evidence scattered throughout the world of a former civilization that does not rely upon mere speculation nor seemingly contrived links. One such piece of evidence recently came to light at Stonehenge in Britain.

Whilst not the largest or most ambitious stone and earthwork in Britain, Stonehenge is certainly the most studied and speculated about. We actually know very little about the site, and what it was built for, but we do know that the structure was built in stages and over a long period of time. Exact dating cannot be confirmed, yet it is generally believed that the work started around 3100BCE and ended around 1100BC.

Archaeologists report that the first phase of construction consisted of a simple circular embankment comprising a few wooden poles and upright slabs. The second phase of the building was marked by the erection of two rows of bluestones forming a crescent at the centre of the site. The doorways and trilithons were completed in phase three and in phase four, about 1100BCE; the bluestones were reset and the roadway was extended. (32)

It now appears that the early date of 3100BCE should be pushed back by several thousand of years, not because of some alleged astronomical connection, but because of carbon dating. And it should be pushed back to a time before any such construction should have even entered the minds or abilities of Neolithic man.

This redating stems from a discovery made in 1997 when the bases of formerly huge wooden sighting posts were discovered at the Stonehenge site. It has now been demonstrated that these posts were aligned to target the Moon's northern most setting point and carbon dating revealed that they had been placed in position ten thousand years ago. Of course this discovery does not mean that the other accepted datings should be abandoned: we know that Stonehenge was built in stages, it just appears that the earliest stages were built thousands of years earlier that previously identified.

Yet up until around 4000BCE, the prehistoric people of southern Britain were still living in scattered groups, surviving on hunted game and fish, and eating wild plants. They lived in skin tents, neither growing their own crops nor keeping animals. Tools were still being made out of flint, bone or deer antler.

It is difficult to understand why such a people would have built an astronomical calculator four thousand years even before this Neolithic lifestyle at a time when the iceage was finally drawing to a close – unless it was built by a civilization which predated them.

Further evidence of such an earlier civilization was found in 1985 when a Japanese diver came across a curiously shaped stepped pyramidal structure off the coast of Yonaguni Island, close to Taiwan. This structure predates the earliest known signs of Palaeolithic settlement of Japan by over 5000 years.

The find was one of a number hidden under the sea with the best documented of them being named the 'Monument'. This structure has the general appearance of a vast underwater structure with steps or platforms and has been compared, although overly generously, with the various pyramidal and temple structures in the Americas. (33)

The Monument is over 160ft long in an east-west direction and over 65ft wide on a north-south direction. The top of the structure lies a mere 16ft below sea-level, however the base of the structure is approximately 80ft below the surface.

If the Monument is artificial then it must have been carved at a time when it was above sea-level, and based on data of sea-level rises in the region (34) it will be between 8000 to 10,000 years old. As Jim Mower, an archaeologist at University College, London commented "If it is confirmed that the site is as old as 10,000 years and is manmade, then its going to change an awful lot of the thinking on southeast Asian history." (35) Mower drew this conclusion as the first signs of civilization in Japan can only be traced back to 9000BCE, when local inhabitants were hunters and food gatherers. No archaeological records exist to suggest the presence of a culture so advanced as to be capable of building the now submerged structure.

Robert Schoch, the Boston geologist, by this time intrigued by the idea of a lost, former civilization, carried out an examination of the structure to determine if it was man made. He notes, "one of the first things I found is that the Yonaguni Monument is, as far as I could determine, composed entirely of solid 'living' bedrock. No part of the structure is constructed of separate blocks of rock that have been placed into position. This is an important point, for carved and arranged rock blocks would definitively indicated a manmade origin for the structure – yet I could find no such evidence." (36)

However Professor Masaaki Kimura, of the Department of Physics and Earth Sciences at Okinawa's Ryukyus University and the first scientist to investigate the site, is less cautious. "The object has not been manufactured by nature ... if that had been the case, one would expect debris from erosion to have collected around the site, but there are no rock fragments there." (37)

Schoch does not agree, however admits, "We should also consider the possibility that the Monument might be a natural structure that was utilized, enhanced and modified by humans in ancient times ... On Yonaguni Island and elsewhere there is an ancient

tradition of modifying, enhancing, and improving on nature. On Yonaguni there are very old tombs that stylistically appear to be comparable to the 'architecture' of the Monument." (38) Schoch concludes, "Since last September [1997] Professor Kimura has seemingly softened his position somewhat regarding how much of the Yonaguni Monument is 'man-made' or 'artificial' and how much is 'natural.' He is now referring to the Monument as being 'terraformed' – that is, natural geological features that have been manipulated of modified by human hands ... This is essentially the position that I have come to, so perhaps Dr Kimura and I are converging in our opinions of the Monument." (39)

With the Sphinx in Egypt and the Yonaguni Monument off Japan both indicating the possibility of an ancient and lost civilization, a similar find from prehistory in the Americas would appear to confirm its former existence. And indeed high on the Peruvian and Bolivian border lies the evidence. The mystery starts with an ancient waterbed that covers an area of 3200 square miles, being 70 miles wide and 138 miles long.

The inland waterway is called Lake Titicaca and is littered with millions of fossilized seashells. The lake also features a range of oceanic types, as opposed to freshwater marine life. Creatures brought to the surface in fishermen's nets have included examples of seahorses. (40) During the 19th Century Professor P. M. Duncan, studying the lake, noted the existence of siluroid, cyprinoid and other marine fishes in the lake. (41)

According to legend, Lake Titicaca is the birthplace of the Inca civilization. The sun god instructed his children, Manco Capac and his sister-wife Mama Ocllo, to travel until they found a place where a golden rod would sink into the Earth.

Having discovered such a place on an island in Lake Titicaca, they gave birth to the Inca race, the 'children of the sun'. This island, known as the Island of the Sun, remains one of the lake's most scared places and the local Indians still celebrate this 'birthday' with a festival every November 5th. (42)

Close by the lake is the ancient city of Tiahuanaco. There is evidence that the city was once a port, having extensive docks positioned right on the earlier shoreline of the now inland waterbed. One of these wharves is big enough to accommodate hundreds of ships. (43)

There would be nothing at all remarkable about Lake Titicaca nor its city were it not for the fact that the lake, resplendent with fossilized sealife and its nearby port city is now situated some 12,500 feet above sea level. At some point in its past, the lake was at sea level, and some immeasurable force has pushed it skywards to rest high in the thin mountain air of the Peruvian Andes where now 'only the graceful reed boats of the native people who still fish its depths and the restless winds of the past disturb the calm surface.' (44)

The City of Tiahuanaco is also full of mystery. Lying at a height of some 13,000 feet, it lies on a plateau that looks like the surface of a foreign planet. The atmospheric pressure is nearly half as low as at sea level and the oxygen content of the air is similarly small. This isolation and altitude makes the very construction of the city all the more remarkable.

Who had built the city? "I asked the natives whether these edifices were built in the time of the Inca," wrote Pedro Cieza de Leon at the time of the Spanish Conquest, "They

laughed at the question, affirming that they were made long before the Inca reign and ... that they had heard from their forebears that everything to be seen there appeared suddenly in the course of a single night." (45) Another chronicler noted the tradition that the stones had been miraculously lifted off the ground, "they were carried through the air to the sound of a trumpet." (46) The historian Garcilaso de la Vega made the following notes about the city soon after the sixteenth century conquest: "We must now say something about the large and most incredible buildings of Tiahuanaco. There is an artificial hill, of great height, built on stone foundations so that the earth will not slide. There are gigantic figures carved in stone ... these are much worn which shows their great antiquity. There are walls, the stones of which are so enormous it is difficult to imagine what human force could have put them in place. And there are the remains of strange buildings, the most remarkable being stone portals, hewn out of solid rock; these stand on bases anything up to 30 feet long, 15 feet wide and six feet thick, base and portal being all of one piece ... How, and with the use of what tools or implements, massive works of such size could be achieved are questions which we are unable to answer ... Nor can it be imagined how such enormous stones could have been brought here." (47)

The 'enormous stones' weighed 100 tons and were topped with other 60-ton blocks for walls. Smooth surfaces with precision accuracy join the blocks of stone which were held together with copper clamps, a masonry technique not known to have been used anywhere else in South America, but in use in Ancient Egypt.

There isn't much left now of this ancient city. In the 1500s the Spanish systematically destroyed the buildings, and later many of the stone blocks were looted for houses in a nearby village. More recently some of the remaining stone was taken to lay a railroad right-of-way.

Despite this, what is left is still impressive, boasting a pyramid 700 feet long, 500 feet wide and 50 feet tall. There is also a temple 440 foot long, topped with columns up to 14 feet high that might once have supported a roof.

The precision accuracy of the buildings that remain led to a puzzle that was later to be solved by Professor Arthur Posansky (1874-1946). Posansky had spent much of his life studying the ancient city, including the enclosure known as Kalasasaya, one of the main ritual areas of the city. Posansky realized that this area was an astronomical observatory, however the points, which should have marked the winter and summer solstices, appeared to be slightly misaligned. Posansky concluded that if the ancient builders had demonstrated an ability to create this magnificent city with its precision engineering, it would be unlikely that they would have botched such a fundamental and important feature.

Science, as ever, lent a hand to solve the puzzle. Today, the two tropics are 23.5° north and south of the equator, however, over a cycle of 41,000 years, the position of the tropics changes along with the Earth's roll in space (the obliquity of the ecliptic) from 22.1° to 24.5° .

Posansky therefore set about establishing at what point in history the two observation points were correctly aligned with the enclosure. His result did not make for comfortable reading, for he concluded that the Kalasasaya was constructed some 15,000 years BCE. (48) Actually he was wrong. But not very wrong.

Of course it may well be that the ancient builders, whoever they were, (remembering that the city was constructed before the distant memory of even the Incas) simply made a clumsy attempt at building the enclosure. This appears unlikely, and together with information that the Sphinx and the pyramids have already pushed back our accepted view of when mankind was in a position to undertake vast construction and astronomical projects, an early date may well be valid.

Posansky's work was rejected at first, however his research and conclusions came to the attention of a four man German Astronomical Commission whose purpose was to study archaeological sites in the Andes. This team, led by Dr Hans Ludendorff of the Potsdam Astronomical Observatory studied the Kalasasaya between 1927 and 1930. The team concluded that Posansky was basically right, although they considered that construction probably took place 9300 years BCE rather than Posansky's favored 15,000 years. (49)

There was also other evidence to support the early dating of the city. One of the most famous features of the ancient city is the 'Gateway to the Sun'. This feature, nearly ten feet high, 12.5 feet wide and carved out of a single block of stone is adorned with pictures of various animals, two of which are intriguing.

One of the pictures is of an elephant, for elephants were unknown on the American continent; there have been no such animals since about 10,000BCE when a creature with tusks and trunk, the Cuvieronius, became extinct. Yet someone had seen such a beast and carved it's image onto the Gateway, supporting Posansky's and others redating of the founding of the city.

The second picture was recognized by Professor Denis Saurat of France. He noted what was quite clearly the head of a toxodon, a prehistoric animal now extinct. According to old (Linnean) classification, the Toxodon and the family Toxodontidae were South American notoungulates of the Pliocene and Pleistocene eras. (The Pliocene Epoch preceded the Pleistocene and ended about 1.6 million years ago).

The Toxodon itself is described as rhinoceros-like, about 2.75 meters long fully grown, and probably a mixed browser and grazer.

It is unlikely that Saurat misidentified the animal for images of toxodons are also featured on ancient Tiahuanaco pottery and even in nearby sculptures. (50) But how could mankind have drawn pictures of such ancient and extinct creatures unless he had seen them?

The answer to this puzzle may lie in a prehistoric waterbed in Texas, USA. But first, a quick resume of time.

A BRIEFER HISTORY OF TIME

The importance of these findings will not be apparent without an overview of accepted world history to date, for simply pushing back the date of the first known civilization by a few thousand years or so is meaningless in isolation.

It is now assumed that the universe itself burst into existence some 15 billion years ago. For the first few hundred thousand years matter and radiation intermingled to form a thick fog. Then, around 300,000 years after the 'Big Bang' temperatures fell and electrons began to bind into hydrogen and helium nuclei to form the first stable atoms. Soon

the universe began to fill with gas clouds and these eventually formed galaxies. Four billion years after the Big Bang, these galaxies spawned the first stars and as these stars aged and collapsed, new generations of stars were born from newly created elements.

After a further 10 billion years, a small star ignited on the third spiral arm of our unremarkable galaxy. This star gave light and heat to dust and rubble caught in its gravitational pull, and from this debris four rocks formed in gravitational eddies, each attracting other space 'leftovers' as their own gravitational pull developed. The star also led to the formation of larger 'gas' planets further out in its 'solar' system.

The first of these rocks, Mercury, became a barren planet, similar to the size of the Earth's Moon. It was first photographed in detail in March 1974 by the Mariner 10 spacecraft and, although having craters mountains and ridges, it's massive temperature fluctuations, (which can be as high as 425° C on the equator at noon, and plummeting to 180° C just before sunrise) make for the existence of life there 'as we know it' being more than improbable.

The second rock from the Sun is Venus. This planet is the closest to Earth and the brightest object in the sky, apart from the Sun and Moon. This light is due to its covering of dense clouds that reflect over three-quarters of the sunlight received by the planet.

These clouds actually conceal a deadly atmosphere, for although the main atmospheric gas is carbon dioxide, traces of other substances have been detected, including hydrogen sulphide, carbon monoxide, sulphur dioxide and hydrochloric acid.

The surface was photographed for the first time in October 1975 by the then Soviet Spacecraft Venera 9. This showed the planet's surface to be rocky with stones scattered across it with what appears to be soil in between. Conditions on Venus also suggest that it could not support life as we know it.

Then there is the third rock from the Sun. A planet different from all others in the Solar System; for it is teeming with life, vegetation, water, and incredible scenery (at least to human eyes.)

The blue planet is almost 8000 miles in diameter, and moves around the sun in harness with its Moon at a distance of approximately 93 million miles.

Images from space show the familiar face of the planet, however the continents have not always occupied their current positions. Up to 225 million years ago, most of the land on the planet was combined into one 'supercontinent' named 'Pangaea' by geologists.

This composite landmass made for the easy and rapid spreading of life forms and vegetation.

The planet's historical periods have been broken down by geologists into the pre-Cambrian period (4600-590 millions of years ago) when there were few fossils. The Paleozoic (590-225 millions), by the end of which reptiles were dominant. This period also saw a major extinction when many species of plants and animals died out. The Mesozoic period (225-65 millions) ended with the Earth probably being struck by a huge asteroid that wiped out the dinosaurs and allowed mammals to dominate through the subsequent Cenozoic period which ended two million years ago with modern type animals scattered across the planet surface.

Throughout its history, the planet has also seen many ice-ages, with the Mendenhall

Glacier in Alaska formerly reaching well into the United States and as far south as present day London, England during the last of these periods.

Until the 18th Century however, few were curious about the planet's history, nor did many question the tradition that all life on it had been created in 4004 BCE; a date calculated by Archbishop Ussher, who merely added up the ages of figures in the Christian Bible back to Adam and Eve. This orthodox Christian view demanded literal acceptance of the origin of all things as described in the book of Genesis in the Bible. Each and every thing on the planet – and only on this planet – was especially created by God, and humankind was the crowning achievement of this rather hectic six days.

Any suggestion that living things could change through time inherently suggested that they were imperfect, and God would not have created something imperfect unless s/he was imperfect as well. Creationists also argued that God would not create an animal or plant only to let it become extinct later.

Yet the fossil record throughout the world could not be ignored. Shells, teeth, coiled ammonites, and bones, all made out of rock, were constantly being unearthed to provide a challenge to the creationist theory. Early ideas on their origin were vague and diverse. Some believed that the fossils were the workings of a life force in the Earth, straining to make images of the creatures of God's creation. Others suggested that the eggs of real animals had lodged in the rocks and developed as rocky tumours (1). In order to explain these findings in religious terms, the fossils were said to be the remains of creatures drowned in the flood, a theory which also explained how the fossils of sea creatures were found on the top of mountains. (2)

Whilst this remains the position of many Christians throughout the world, others recognized that living things do change, and the concept of 'evolution' was born. This theory has generally been credited to Charles Darwin, although, in fairness, others made significant contributions to the idea: They just didn't happen to be English so were, in the main, forgotten about.

Eight years after publication of Darwin's book, naturalist Ernst Haeckel made one of the first attempts to deal with the specifics of evolution. Although his genealogical chart, starting with a blob of protoplasm and continuing to a 'modern' Papuan is filled with misconceptions and fictitious characters, the concepts were broadly accurate considering the paucity of knowledge in his day.

The general concept of Darwin's evolution is that there is a continuous struggle for existence and those species which adapt (evolve) are the most likely to survive.

This is no longer an accepted view of the theory. Many now agree that some changes are merely random mutations, which happened to suit the environment and survived. However such mutations would only have taken hold if they occurred in small, isolated populations. (3)

Whatever its process, evolution has led to the development of approximately 30 million separate species on Earth at the present time and it is estimated that a further 3 billion species may have previously existed but become extinct (4).

Evolutionists contend that small living organisms first appeared on Earth 630 million years ago and some 500 million years later a tiny shrew-like creature appeared on the

planet's surface. About 60 million years ago, after the dinosaurs' extinction, the early primates on the planet diversified rapidly and by 50 million years ago monkeys and apes had evolved.

The ape-human divergence happened relatively recently, between five and eight million years ago (5) and the first members of our genus, Homo, evolved from the African australopithecines approximately 2 to 1.5 million years ago. The number of skulls and skeletons that have been found indicate that most Australopithecus died before they reached the age of 20 suggesting a large number of orphaned children who would have been raised by surviving 'elders'. (6)

It is generally recognized that "two million years ago, this first certain ancestor of man walked with a foot which is almost indistinguishable from the foot of modern man. The fact is that when he put his foot on the ground and walked upright, man made a commitment to a new integration of life..." (7)

This first real man is known as a maker of simple stone tools and the upper cavity of his skull suggests a brain volume of only half that of a modern human, but with a zone of the cerebral cortex known to be responsible for speech production (8). This man could walk upright and talk.

Then one million years ago, Homo erectus appeared and spread far beyond Africa. One find of this kind was made in China and called 'Peking Man'; a 400,000-year-old creature that was the first to use fire.

By this time a 'brain explosion' had occurred with the human brain inexplicably expanding by another third, with most of that growth occurring in the cerebrum, the area of the brain used for thinking.

Neanderthal man then appeared some 150,000 years ago, however this line of man died out to be replaced (or displaced) as Cro-Magnon man established himself as the enduring human life form on the planet some 100-90,000 years ago. (Some have speculated that Cro-Magnon man, Homo sapiens, actually destroyed Neanderthal man.

It is an unattractive thought that our race may have survived because we were prepared to kill our fellow man.)

By this time period, we can get more insight into mankind's functioning and abilities. Firstly, it is important to dispel one or two mental myths. Take a look at a sculpture of iceage man. He would not look out of place in classical Greece, or perhaps in the Roman Senate.

However that would not have been possible, for it is a man who lived some 20,000 years before the Greek and Roman civilizations. (In fact recent discoveries indicate that man has changed little anatomically in the last 100,000 years.)

We popularly imagine our ancient ancestors as primitives, scratching out a living from cold barren caves, preying on unsuspecting animals for food that is then roasted over man's greatest discovery, fire.

The more mentally agile, may even throw in a scantily dressed Racquel Welsh looka-like poised up a tree as a Tyrannosaurus Rex thunders by.

(Political and historical correctness, of course, did not exist then.)

Yet 'ice-age' man was far from the primitive we popularly conceptualize. We know

this from paintings he has left behind in caves such as those at Lascaux in France, and from other evidence.

One such piece of evidence had lain forgotten in a dim corner of a French museum. Then in 1965 a researcher examined this fragment of a carved reindeer bone. Under a microscope a pattern could be discerned, a pattern which appeared to represent the phases of the moon over a period of two months.

Shack, the person who made the discovery, recalls the find. "Whether or not the image is accepted as lunar, as it seems to be, I had discovered the earliest known human notation, made more than twenty thousand years before the development of writing, arithmetic, or the calendars of later cultures we regard as civilized. Gradually the bone told me a great deal about the skills of its owner, and how he may have thought. Patterns of wear identify it as a pressure flaker, a kind of prehistoric machine tool, used to shape stone instruments. The man who made and carried it over a considerable period, also used it as a notebook, apparently to record an important sequence in his everyday life, the changing moon that marked the passing seasons." (9)

This find was remarkable for it suggested that Cro-Magnon man thought in a far more sophisticated way than was believed possible. Up to the discovery of the reindeer bone, all that was known about Cro-Magnon man was pieced together from archaeological remains. These were first discovered in France in 1868. Hundreds of thousands of his stone tools have subsequently been found as have painted images in caves in southwestern France and northern Spain. The reindeer bone was found in 1911 by a French archaeologist Louis Didon in the Blanchard rock shelter near the French village of Les Eyzies.

Shack decided to investigate Cro-Magnon man further with a view to shedding further light on his culture. From a base in Les Eyzies, he journeyed across Europe examining thousands of Ice Age artifacts and engravings. Shack wasn't particularly interested in the physical aspects of Cro-Magnon man, but rather "those fragile and subtle clues as to how he thought." "(10)

Shack concluded that Cro-Magnon man was remarkably sophisticated. No, he did not have electric kettles, mobile phones (or nuclear waste), but he had a skeleton and brain like modern man's and was capable of imagery and abstract thought.

Seventeen thousand years after Cro-Magnon man populated Europe, his world began to melt around him, signalling the ending of the last ice-age. Great glaciers retreated towards the poles and this process lasted until around 7500 BCE, destroying many land bridges in its wake and finally separating the British Isles from mainland Europe, leaving many forests across the globe submerged.

Then during this period, 12,000 years ago, there began the Mesolithic or Middle Stone Age in northern Europe; a food-gathering way of life with fishing and fowling rather than wide-range hunting.

The age produced some important inventions such as the barbed fishhook, the bow and arrow, the cooking pot of baked clay, and perhaps most importantly, the comb!

Within 4000 years the Neolithic age arrived, representing a change from living on nature to cooperating with nature. It depended on two fundamental inventions; the domestication of animals and the cultivation of crops. This way of life produced new flint

tools; the sickle, the hoe and a better made axe. There is also evidence that mankind was beginning to navigate on the open sea as this Neolithic settlement is to be found at Khirokitia on the island of Cyprus.

And then in 6800 BCE there is evidence of Neolithic people settling at the site of Jericho, with houses and a protective wall, suggestive of organized raiding and warfare. At about the same time, a village appears on a tributary of the Upper Tigris at Jarmo where there are also houses made from pressed earth with reed floors.

The area between the river Tigris and the Euphrates was extremely fertile and attracted the people we call Sumerians to settle there. Then by 3000 years ago cities had grown around the rivers Tigris and Euphrates. Some of these, such as Ur, Nippur and Eridu had thousands of inhabitants.

Groups of hunters had, by this time, moved into the Nile valley where they found an abundance of animals, birds and fish, but more importantly, a reliable and plentiful source of clean water in the River Nile.

The farmers eventually joined together to form two kingdoms, Upper (southern) Egypt and Lower (northern) Egypt. In 3100BCE a king, seemingly named Namer by hieroglyphics but traditionally known as Menes, advanced from his southern capital of Abydos and conquered the Lord of the Delta Land and created the First Dynasty of the combined Old and New Kingdoms of Egypt (11). Once the two kingdoms were joined, Egyptian culture flourished until they came up against the seemingly invincible Roman Empire.

In more remote areas of Europe megaliths had appeared apparently to indicate where on the horizon the Sun and Moon will rise and set at special times throughout the year. One megalith is of over thirty-eight stones in a circle at Castlerigg in England. Legend states that the stones are men petrified by the Gods and now serve as astronomical markers. These cultures seemed far removed from the high technologies and mathematical excellence used in the construction of the pyramids, the Sphinx and the city of Tiahuanaco apparently thousands of years before man built his mud-huts in Jericho and positioned these ancient megaliths.

Indeed this accepted view of world history simply cannot account for the planet's real history. It therefore appears that our view of world history is in need of some revision and the possible extent of how much revision was revealed in the early years of the Twentieth Century when a violent flood tore through the Paluxy River Valley in Glen, Close, Texas. What it revealed was startling.

WEIRD HISTORY

In the summer of 1909, a year after this flash flood, local teenager 'Bull' Adams, was wandering through the Wheeler Branch tributary of the river when he came across a series of large, three-toed footprints (1). Bull Adams wasn't to know this at the time, but he just as he was destined to disappear into relative historical obscurity, he was to bequeath to his little brother George a profitable sideline that would generate much controversy in the years to come. These three-toed footprints were first recognized as dinosaur prints by local schoolmaster, Mr. R. E. McDonald, and they have since been more specifically identified as tracks from a large theorpod dinosaur called Acrocanthosaurus (2).

There is nothing unique in the discovery of dinosaur footprints in prehistoric former muddy waterbeds, for such footprints can be found in such locations throughout the world. However what was shattering was the discovery made two years later by two other local youths, Charlie and Grady Moss. The brothers were fishing in the Paluxy River itself when they came across a trail of these three-toed dinosaur tracks on a limestone shelf alongside what appeared to be human footprints (3).

These 'giant mantracks' as Charlie Moss described them, were readily accepted as genuine human footprints by the local townspeople, but only regarded as a minor curiosity. It appeared that no one who knew about the tracks considered their full implications; for, as discussed in the previous chapter, our standard geologic timetable of accepted history informs us that there was a gap of over sixty million years between dinosaurs and mankind. (In fact these tracks were even more ancient than that, now being assigned by mainstream geologists to the lower Cretaceous period, some 113 million years ago. (4))

The find of human footprints together with those of these theorpods should therefore be impossible, yet the tracks were there and other supporting evidence of the coexistence of the two species in Paluxy was discovered close-by; namely a fossilized human tooth, a trilobite and a hammer.

This 'evidence' for a revision of history was music to the ears of the 'Creationist' lobby - those who argue that the world is not millions of years old but merely thousands, as 'claimed' by the Bible. Creationists also believe that Earth was created 'old' - though quite why a God who is considered a leading authority on truth and honesty, should have set the ball rolling by starting with a misleading Creation remains unanswered.

News of the mantracks slowly became wider knowledge and led to the publication of several articles and books. Amongst the first creationist advocates of the man track claims was Clifford Burdick, an American who had previously helped found the 'Deluge Society', one of the first Creationist groups.

Burdick's early investigations in the 1940s put him in contact with local Paluxy character Al Berry. Berry was in possession of a number of individual slabs cut from the riverbed with the curious footprints on them. He and local storekeeper, Jack Hill, signed an affidavit stating that they had gone to Glen Rose in the autumn of 1938 to retrieve some 'human' and 'cat' tracks that were in danger of being destroyed by the construction of a small dam on the Paluxy river. The slabs later came into Burdick's possession, with one of them subsequently being named after the new owner; the 'Burdick Print'.

Burdick then published an article about the prints in the Seventh Day Adventist magazine, 'Signs of the Times' in which he stated that the Paluxy riverbed contained clear dinosaur and contemporary human footprints. Burdick's interest wasn't geological; as a creationist he considered the dinosaur and human footprints as irrefutable proof that evolution had not occurred, and that the fossil record was merely formed during Noah's flood. This article generated a new wave of interest (5).

The years passed, and in the early 1960s the existence of the Paluxy mantracks became more widely known when photographs of the loose carvings previously owned by Al Berry and Jack Hill were published in the book 'The Genesis Flood' by John Whitcomb

and Henry Morris (6).

A further creationist book, 'Man's Origin, Man's Destiny' followed in 1975 (7) and shortly after its publication, the tracks came to the attention of Stanley Taylor, a Baptist minister who owned a film company, 'Films For Christ.' Taylor made enquiries of the tracks, and his research led him to produce and narrate a 16mm film entitled 'Footprints In Stone' in 1972.

In this film, Taylor continued to promote the creationist theory by suggesting that several of the prints showed human toes formed alongside and at the same time as the dinosaur prints. Much of the film concentrated on an area now known as the 'Taylor Site' which contains a deep dinosaur trail together with several human like trails, some of which were excavated by Taylor's team from under previously undisturbed rock strata.

The film itself was shown in schools, churches and church groups across America for many years and helped to promote widespread acceptance and belief in the 'mantrack' - and thereby the Creationist - claims.

The concept of dinosaurs and man coexisting in the same time frame, whilst initially appearing untenable, is actually supported by other evidence. As noted in the first chapter, someone in our lost history carved a picture of a prehistoric toxodon in the Gateway to the Sun, high on the Peruvian-Bolivian border. Such a 'one off' find may, at some point in the future, be explained however there are other drawings and carvings that appear to defy explanation. For example, American writer and archaeologist A Hyatt Verrill has demonstrated that the 'Cocle Ceramics' of Panama depict a flying lizard which resembles the pterodactyl (8).

Similarly, in 1924 the Doheny Scientific Expedition discovered in the Hava Supai Canyon in Northern Arizona, a rock carving which looked amazingly like the extinct Tyrannosaurus Rex standing on its hind legs (9). In another rock image in Big Sandy River in Oregon, the prehistoric sculptor left a portrait of what clearly appears to be a stegosaurus; a creature that also lived before man (10).

However the most dramatic evidence of apparent images of dinosaurs on pottery and stone came to light over thirty years ago in various gorges and caves at Ica, a small area some 300-km from Lima in Peru near the famous Nasca lines.

These stones have been termed the Ica Stones and the images on them include what appear to be realistic depictions of Stegosaurus, Tyrannosaurus Rex, Pterodactyls, ancient pilots over a herd of dinosaurs (maneuvering some form of craft), advanced surgical procedures, views of Earth 13 million years ago and men attacking and subduing dinosaurs with hand axes.

The villager from Ica who apparently discovered the stones produced a few bags of them at first, but later produced literally thousands; 15,000 to be exact, ranging in size from the size of a tomato to twice that of a football.

This villager made a modest income selling the stones to tourists and the curious and he became something of a local celebrity. However, as word of his transactions spread, experts descended on Ica, bringing his activity to the attention of the Peruvian Government who promptly arrested him, for they had no intention of becoming another Egypt; overrun with diggers and robbers. The farmer remained imprisoned for some time be-

fore being released and announcing to the world that the stones were a hoax as he had carved the strange pictures on them himself.

However, by this time in 1966, a local physician and Professor of Biology, Dr. Javier Cabrera, had been given one of the stones for his birthday. His particular stone had been carved with the image of a fish; a fish that was known to Cabrera as a species that had been extinct for millions of years.

Cabrera set out to locate the farmer who had admitted to carving the stones, for the picture of the extinct fish had convinced him that the farmer's confession was the hoax rather than the stones themselves. Cabrera could not accept that an uneducated Peruvian village farmer could depict scenes such as medical procedures, dinosaurs, astronomy and flying reptiles. And, as Cabrera's enquiries continued, the full extent of the story became known.

The farmer accused of forging the intricately carved stones farmer admitted to having sold thousands of them, and over a period of time Cabrera himself purchased over 15,000 of them himself.

However even this was not the full extent of the actual number available, for the farmer who claimed he had perpetrated the hoax showed Cabrera a further 100,000 that remained in tunnels near the coastal mountains. It quickly became apparent that the farmer could not possibly have carved the stones himself, casting absolute doubt on the validity of his confession.

As Cabrera continued to be friend the farmer, he learned that he had only been released from prison after signing the confession that the stones had come from the hills but that he had been carving them himself. (It was either that or remain in prison for the remainder of his life for selling 'government possessions.')

Many of the stones now feature in Dr Cabrera's own museum where they are divided into topical sections: Medicine, astronomy, astronautics, dinosaurs, ancient continents, flora, fauna, planetary races of people and mechanical airships with men leaving Earth.

Some claim, as does Cabrera himself, that the Ica Stones are an ancient library left by a forgotten culture, others continue to dismiss the entire collection of stones as an elaborate hoax.

The hoax theory appears the most obvious solution, particularly as there is a signed confession to that effect, yet it is impossible to believe that one man could have hand engraved the hundreds of thousands of the stones known to exist. That would mean the farmer had carved around seven stones a day for forty years without a break (and without any time left to sell them). It would also mean that this uneducated man had knowledge of all the areas of the carvings he had made and quite why he should have carved an extra 100,000 (many times more than he ever sold) has never been accounted for.

Then there is another fact that appears to dismiss the hoax theory, for the stones were first seen and recorded in 1525 by Jesuit missionary Father Simon who accompanied Francisco Pizarro, the sixteenth-century European explorer and conqueror of the Inca Empire. (Samples were later shipped to Spain in 1562.)

Why then would the farmer sign such a confession? Obviously he did not want to remain in custody and by signing the declaration, the Government allowed him to con-

tinue selling the stones from his cart in order to supplement his already meagre income. He would have been foolish to have decided otherwise.

The hoax theory has, however, stuck and no serious investigator has revisited the Ica Stones mystery although the stones themselves can be inspected at Cabrera's museum. If Cabrera's views are correct, and on balance they appear to fit the known facts, then a comprehensive picture appears to be developing; carvings on stones in Peru, carvings of toxodons at Tiahuanaco, mantracks in Texas, pictures of dinosaurs in Oregon and elsewhere in America.

Yet if our accepted view of history is to be revised, there would need to be considerable further evidence in support of such a revision.

And there is.

One such piece of evidence came to light on 13th February 1961 when three rock hunters, Mike Mikesell, Wallace "Wally" Lane and Virginia Maxey were collecting stones about six miles north east of Olancha, California for the 'Gem and Gift shop' they coowned. They came across a stone located near the top of a peak approximately four thousand three hundred feet above sea level and three hundred and forty feet above the dry bed of Owens Lake. The following day, Mikesell cut the stone in half and found inside a three quarter inch wide cylinder made of porcelain or ceramic, and in the centre of the cylinder was a 2mm shaft of a bright metal. The shaft was magnetic and had not oxidized. Circling the ceramic centre were rings of copper, which had also not corroded

.

Not knowing what to do with the object, the shop owners sent the object to the Charles Fort Society. X-rays taken revealed that the 'geode' was some kind of mechanical apparatus and that one end was fixed to a spring or helix of metal. These tests suggested that the artifact was some form of electrical instrument, and geologists confirmed that the rock in which it was found was at least half a million years old (11). That said, no professional scientist has ever investigated the artifact, nor is it likely to be as the owners have continued to request an exorbitant payment before they will let anyone see it.

Other finds are equally intriguing. In the June 1851 issue of Scientific American a report concerning a metallic vase that had been dynamited out of solid rock at Meeting House Hill in Dorchester Massachusetts was reprinted from the 'Boston Transcript'. "On putting the two parts together it formed a bell shaped vessel, four and a half inches high, six and a half inches at the base, two and a half inches at the top and about an eighth of an inch in thickness. The body of this vessel resembles zinc in color, or a composition metal in which there is a considerable portion of silver. On the sides there are six figures of a flower, a bouquet, beautifully inlaid with pure silver, and around the lower part of the vessel, a vine, or wreath, inlaid also with silver. The chasing, carving and inlaying are exquisitely done by the art of some cunning craftsmen. This curious and unknown vessel was blown out of the solid pudding stone, 15 feet below the surface" (12). Journalists and archaeologists investigating this puzzle estimated that the solid rock, which had entombed this vase, was at least several million years old.

Some years before, a Colorado man obtained coal from a drift mine known as the Marshal coal bed, the coal being taken from a point 300 feet below the surface. The

Scientific American report continues:

"Upon my friend's return home he placed some large chunks of the coal in the stove, but not burning well, he broke them and in the midst of one, imbedded in a hollow place, but completely surrounded by the coal, the thimble was found. These coal beds are classed by Prof. Hayden as lignitic and lying between the Tertiary and the Cretaceous. Much of the coal is 'fresh'; some of it is too 'green' to burn well. My informant says the chunk in which the thimble was found 'showed the grain of the wood'. For some time he kept it, but it is now lost. The thimble was full of coal and sand and retained its shape well. (13)" The end of the Cretaceous period was most notably marked by the end of the dinosaurs.

On 9th June 1891 a Mrs. S. W. Culp of Morrisonville, Illinois, was shovelling coal into her kitchen stove when she discovered a lump of the coal broken in two revealing a gold chain of intricate workmanship. The Morrisonville Times of 11th June reported the story; "Mrs. Culp thought the chain had been dropped accidentally in the coal, but as she undertook to lift the chain up, the idea of its having been recently dropped was shown to be fallacious, for as the lump of coal broke, it separated almost in the middle, and the circular position of the chain placed the two ends near to each other; and as the lump separated, the middle of the chain became loosened while each end remained fastened to the coal..... This is a study for the students of archaeology who love to puzzle their brains out over the geological construction of the earth from whose depths the curious are always dropping out." (14) The coal was reported to be from the Carboniferous period and therefore some two hundred and sixty million years old.

Similarly, on the 22nd of June 1844 workmen were blasting granite out of a pit in a quarry near Rutherford Mills in England. The came across a gold thread embedded in rock judged by archaeologists to be 60 million years old (15).

In Pennsylvania in 1937, a Mrs Myrna Burdick found a spoon among ash from burnt coal. The ashes had not been disturbed after a large piece of coal was burned, but when they fell apart, the spoon was noticed among them (16).

The Springfield (Illinois) Republican reported in 1851 that a businessman, Hiram de Witt, had brought back with him from California a piece of auriferous quartz about the size of man's fist. When showing this rock to a friend, it slipped from his hand and split open on the floor. In the centre of the quartz they found a cut iron nail, slightly corroded but straight with a perfect head. The quartz was estimated to be over a million years old (17).

Certainly someone was walking on the planet millions of years before they should have been. What appears to be a footprint was found in a limestone bed in Nevada dating from a period before the coming of man.

Other puzzles include a nail half bedded into a granite block excavated from the Kingoodie Quarry near Dundee in Scotland, with the granite estimated at being at least 60 million years old. This find was made around 1844 and the circumstances of the discovery were given in the following contemporary report:

"The stone in Kingoodie quarry consists of alternate layers of hard stone and a soft clayey substance called 'till'; the courses of stone varying from six inches to upwards of

six feet in thickness. The particular block in which the nail was found, was nine inches thick, and in proceeding to clear the rough block for dressing, the point of the nail was found projecting about half an inch (quite eaten with rust) into the 'till', the rest of the nail lying along the surface of the stone to within an inch of the head, which went right down into the body of the stone.

"The nail was not discovered while the stone remained in the quarry, but when the rough block (measuring two feet in length, one in breadth, and nine inches in thickness) was being cleared of the superficial 'till'. There is no evidence beyond the condition of the stone to prove what part of the quarry this block may have come from It is observed that the rough block in which the nail was found must have been turned over and handled at least four or five times in its journey to Inchyra, at which place it was put before masons for working, and where the nail was discovered." (18)

A two-inch metal screw discovered in a piece of feldspar unearthed in 1865 from the Abbey Mine in Treasure City, Nevada. The screw had long since been oxidised but its form, particularly the shape of its threads, could be clearly defined in the feldspar, which were millions of years old (19).

In 1885 in the foundry of the Austrian Isador Braun of Vocklabruck, a block of coal dating from the Tertiary period was broken open. Inside was discovered a small metal cube. The cube was taken to the Salzburg Museum where Austrian physicist Karl Gurls examined it.

Tests indicated that the cube was composed of a steel and nickel alloy. It measured 2.64 by 2.64 by 1.85 inches; weighed 1.73 pounds and had a specific gravity of 7.75. The edges of the cube were straight and sharp; four of its sides were flat, whilst the other two remaining sides, opposite each other, were convex. A deep grove had been cut all the way round the cube about half way up its height. There appeared little doubt that the cube was machine made and seemed to be part of a larger mechanism (20).

In the late 1780s, in a quarry near Aix-en-Provence in France, coins, hammer handles; other tool fragments and broken boards were found "all changed into agate". These finds were 50 feet deep "and covered with eleven beds of compact limestone (21)".

In November 1830 a block of marble was quarried from a depth of 60-70 feet in a quarry near Norristown, Pennsylvania and when slabs were cut off the block, two raised characters, resembling the letters I and U were found in an rectangular indentation 1.5 inches long and 5/8 of an inch wide in the marble (22).

Five miles out in the Mediterranean, directly south of Marseilles, Jacques Mayol, a French diver, explored a mile long shoal, running at a depth of sixty to one hundred and twenty feet with vertical shafts, quarries and slag heaps lying outside the shafts. In other words, a man-worked mine from a period in man's development contemporary with Cro-Magnon man (23).

On August 2nd 1890, Superintendent J H Neale of the Montezuma Tunnel Company signed the following statement about discoveries made by him at Table Mountain in Tuolumne County, California. "At a distance of between 1400 and 1500 feet from the mouth of the tunnel, or of between 200 and 300 feet beyond the edge of solid lava, Mr Neale saw several spearheads, of some dark rock and nearly one foot in length. On exploring fur-

ther, he found a small mortar three or four inches in diameter and of irregular shape. This was discovered within a foot or two of the spearheads. He then found a large well-formed pestle, now the property of Dr. R. I. Bromley, and near by a large and very regular mortar, also at present the property of Dr. Bromley.

"All of these relics were found the same afternoon, and were all within a few feet of one another and close to the bedrock, perhaps within a foot of it. Mr Neale declares that it is utterly impossible that these relics can have reached the position in which they were found excepting at the time the gravel was deposited, and before the lava cap formed. There was not the slightest trace of any disturbance of the mass or of any natural fissure into it by which access could have been obtained either there or in the neighborhood (24)." What is remarkable is that the pestle and mortar are dated to 33-55 millions years old.

In a paper read before the American Geological Society and published in its journal in 1891, geologist George F Becker, stated; "It would have been more satisfactory to me individually if I had myself dug out these implements, but I am unable to discover any reason why Mr Neale's statement is not exactly as good evidence to the rest of the world as my own would be. He was as competent as I to detect any fissure from the surface or any ancient workings, which the miner recognizes instantly and dreads profoundly.

"Some one may possibly suggest that Mr Neale's workmen 'planted' the implements, but no-one familiar with mining will entertain such a suggestion for a moment ... The auriferous gravel is hard-picking, in large part it requires blasting, and even a very incompetent supervisor could not possibly be deceived in this way.... In short, there is, in my opinion, no escape from the conclusion that the implements mentioned in Mr Neale's statement actually occurred near the bottom of the gravels, and that they were deposited where they were found at the same time with the adjoining pebbles and matrix." (25)

However, Neale's account may not be as honest as he claims and Becker believed, for in a later statement given to William Henry Holmes in 1899 and detailed in 'Review of the Evidence Relating to Auriferous Gravel Man in California' (26) Neale stated that it was one of the miners and not himself who actually discovered the spearpoints inside the tunnel. Then later, when he discussed the matter with a Dr. Sinclair he changed his story again and reported that he had discovered all of the artifacts except for a stone dish or platter found by a miner simply known as 'Joe.' (27)

Neale's story and affidavit do suffer from a lack of documentary and other supporting evidence, however one piece of evidence that Earth does have a hidden history is not so similarly flawed. This clue came to light in 1929 at the Old Imperial Palace in the then Constantinople and it appears to prove that man not only knew of the continent of Antarctica in prehistory (only being 'rediscovered' in 1820) but had also mapped it before it became embedded in ice.

The story starts in 1929 at the old Imperial Palace. There an old parchment was found with a map painted on it dated the month of Muharrem in the Moslem year 919 (1513AD). The map was signed by the Turkish Admiral Piri ibn-Haji Memmed (also known as Piri Reis.) The parchment appeared to show the outline of the coast of the Americas and drew attention as it also appeared to show South America and Africa in correct relative

longitude, despite the fact that the navigators of that time had no way to establish longitude.

The map later came to the attention of Captain Arlington H Mallery, who, in 1951 had published a book entitled 'Lost America'. In that book, Mallery claimed that ancient maps of Greenland show landforms under the present ice cap. The Piri Reis map therefore interested Mallery as it appeared to show the same coastal detail of Antarctica as had recently been identified by the Seismic Survey. In other words, this ancient map appeared to show the outline of the Antarctic Coast before it was covered in ice.

Mallery, convinced of the authenticity of the map, asked two astronomers and a cartographer to check his assertion that the map accurately showed coastal detail of Antarctica's Queen Maud Land. He wanted this confirmation before going public. And on being satisfied that he had this confirmation he duly went public on radio on August 1956 and announced his discovery. (28)

Mallery's work, by this stage had come to the attention of one Charles Hapgood, a Professor at Keene State College who, at that time, was working on a theory of 'Earth Crust Displacement'. (Hapgood later published this work in 1959 as 'Earth's Shifting Crust', complete with an encouraging, but ultimately erroneous, introduction from Albert Einstein.)

Hapgood, along with his students at the college, began a tireless research into the Piri Reis and other ancient maps, and eventually published 'Maps of the Ancient Sea Kings' in 1966. (This book has recently been reissued following a further wave of interest most notably generated by the work of Graham Hancock, the Flem-Aths and others.)

In that work, Hapgood states "in one of the legends inscribed on the map by Piri Reis, he stated that he had based the western part of it on a map that had been drawn by Columbus." Hapgood added "Piri Reis made other interesting statements about his source maps. He used about twenty, he said, and he stated that some of them had been drawn in the time of Alexander the Great and some of them had been based on mathematics." (29)

The conclusions to be drawn from Hapgood's work are as startling as those from Schoch's redating of the Sphinx, for we know that the very last time the coastline could possibly have been sufficiently free of ice would have been eight to ten thousand years ago, but more probably millions of years ago if the opening of the Holocene period was not warm enough to melt the ice. This map therefore appears to be evidence that there existed on this planet, or at least Antarctica, at that time person or persons unknown who conducted their lives in a way that required reasonably sophisticated maps of the area during a period when we are taught that no such civilizations existed! (The maps must have come from a civilization, as only an advanced society would have required them.)

Who, then, was this Piri Reis? Perhaps the most succinct and best account of the man and his life is contained within a letter written by the Turkish Embassy in Washington as a reply to a letter dated October 16th 1960, from Hapgood, himself.

Piri Reis "was born at the town of Karaman, near Konya, Turkey. The exact date of his birth is unknown. In his early youth he joined his Uncle Kemal Reis, a well-known pirate. He distinguished himself during the operations of his uncle's small fleet on French and

Venetian coasts. When Kemal Reis had abandoned piracy and joined the Imperial Ottoman Fleet during the reign of Beyazit II (1481-1512), Piri Reis followed suit and was appointed captain. The battles of Modon and Inebahti (Lepanto) made him famous. According to historian Von Hammer, 'he gained awesome fame' for his deeds in these expeditions.

"Piri Reis, whose real name was Ahmet Muhiddin, stayed with the Ottoman Fleet during the reigns of Yavuz Selim (1512-1520) and Suleiman the Magnificent (1520-1566). He served as an aide to Barbaros Hayrettin Pasha, Great Admiral of the Imperial Ottoman Fleet. In 1551 he was elevated to the rank of Commander in Chief of the Fleet of Egypt, then a dependency of the Ottoman Empire...Piri Reis was executed in Egypt in 1554.

"'Kitabi Bahriye – the Navy's Book', which was the most famous of his works, is considered as an excellent geography book of his times. He also prepared a map of the world, which has been reproduced in recent years. He wrote many poems too." (30)

Hapgood, convinced, as was Mallery, that the map put together from older maps by Piri Reis did show the outline of part of Antarctica before it was covered in ice, sought independent verification of his conclusions. To that end he wrote to Colonel Harold Ohlemeyer at the United States Airforce, 8th Reconnaissance Technical Squadron. He received a reply, dated 6th July 1960.

Ohlmeyer's conclusion was what Hapgood was looking for. "We have no idea how the data on this map can be reconciled with the supposed state of geographical knowledge in 1513." However, looking at the map itself, it is not so easy to be impressed on first examination. Indeed the first thoughts that come to mind, include, what exactly is it a map of, and if it was used, did the navigators become hopelessly lost when using it? One cannot help a wry smile, in forgiving Columbus for thinking America was India if he used maps such as this appears to be.

The top right-hand side of the map shows the outline of Spain, above western Africa, with the left side of the map showing the outline of the Americas flowing down to Antarctica. (The map appears to merge Antarctica and the Americas into one continuous coastline by missing out Drake's Passage at the tip of Southern America.)

At first glance the map does truly appear clumsy and simply wrong; however, in actual fact, it is our modern understanding of the map that it wrong rather than much of the map itself. Some knowledge of ancient map making helps break the 'code' of the Piri Reis parchment.

Nowadays map-making seems such a simple task given that we can take full aerial photographs of the planet from space. However, to the ancient cartographer, accurately reflecting a three dimensional globe of apparently unknown proportions onto a two-dimensional parchment was no easy matter. (Take a globe; flatten it out and the result shows continents miss-shaped and out of proportion.)

The next difficulty facing the ancient map-maker was how to measure and construct a map. A modern map is constructed on a grid of lines of longitude and latitude, spaced at regular intervals on paper. Ancient maps, often referred to as 'portolan' maps (from 'port to port'), also have lines on them, however these lines appear to emanate from

centres on the map, like spokes from a wheel. Each 'wheel' has either sixteen or thirty-two spokes flowing from it. The entire map would have been centered on some place, with concentric circles emanating out to provide as grid to be drawn upon.

The Piri Reis map is such a portolan map, and in order for its accuracy or not to be established, it needed to be converted into a modern map. This process, however, was further complicated by the fact that the map itself was a composite of may other maps, clumsily assembled into one. (Piri Reis noted that he had combined twenty maps into the world map, and there is no reason to believe that these individual twenty were themselves not composites of even earlier maps.) Mistakes such as showing the Amazon River twice or apparently failing to leave a gap at the tip of Southern America, thus leaving out a 900 mile section of coastline, are amongst many errors on the map. (This later error could be explained by the map of the Antarctic coastline being simply copied on too large a scale, leaving no room for Drake's Passage when the two maps were combined as one.) Piri Reis could, however, be forgiven. He had never visited Southern America and would therefore not have had any reason to believe there were errors in the parchment

Once the necessary adjustments had been made, researchers claim the Piri Reis map is an accurate reflection of the coastline of Queen Maud Land in Antarctica before it was covered in ice.

Apart from making these adjustments, there is other supporting evidence of this. Examination of the bottom area of the map appears to show islands off the coastline, and yet there are now no such islands. However, the drawing of these islands on the map actually support it's authenticity.

The Seismic Survey of Antarctica, revealed a number of mountain ranges which, when the area was ice-free and sea levels were higher, would have appeared as islands off the coast matching those on the Piri Reis map.

However, some researchers have been dismissive of this section of the map, stating that the coastline is probably from elsewhere, purely on the grounds that it cannot possibly be the Antarctic coastline before it was iced over. They propose that the coastline shown is actually part of South America.

The argument is that if the land believed to be Antarctica was depicted vertically instead of horizontally it would bear a resemblance to the east coast of South America and could well restore some of the 'missing' 900 miles around Drake's Point. This would also account for the pictures of animals drawn on the map; they would not be in an ice-free Antarctica but in South America.

However Piri Reis, himself, answers critics who propose this argument, for he wrote on the map that night in the area shown is only "two hours long," highly indicative of Antarctic latitudes and hardly compatible with South American latitudes. (Those who refuse to accept that the map might show Antarctica in ice-free times forget that the Piri Reis map also shows Greenland to consist of three separate islands under the ice; a fact not known to modern man until the seismic data produced by Paul Emile Victor.)

It appears that, somehow, sometime in our prehistory, someone unknown to us walked across the face of the planet, leaving behind intriguing clues to baffle later generations.

But could man's history really be traced back to the time of the dinosaurs?

The riverbed at Paluxy appeared to have squared this circle with proof that man had indeed lived contemporaneously with these giants of the past. However up until the early 1980s the area had only been examined by those who wanted to believe in the mantracks and, as such, a more scientific approach was required to consider the claims made. Indeed up to 1982 mainstream scientists had largely ignored the situation, probably fanning the intrigue they had generated.

Then in 1982, then, a team of four scientists, Laurie Godfrey, Ron Hastings, John Cole and Steve Schafersman travelled to the riverbed to examine the prints for themselves. They called themselves the 'Raiders of the Lost Tracks' and in subsequent reports noted that, in their opinion, none of the tracks showed clear human features. Their work was brief, and in fairness not as thorough as could have been expected, however they were the first mainstream scientists to consider the issue. Claims and counter claims were made over subsequent years however, the idea that the riverbed in Paluxy has man tracks side by side with dinosaur tracks now holds little credibility.

George Adams, the brother of 'Bull' Adams who had made the original find, delivered another body blow. He had cashed in on the interest generated in the tracks by selling what were supposedly individual blocks with 'mantracks' on them. However, Adams later admitted that he had created these blocks himself. Adam's nephew Wayland once even told a group of creationist researchers how his uncle created the 'tracks'. He advised that his uncle would start with a suitably sized block already containing a depression (making the job easier), and then carve in the human features (31). Unfortunately Uncle George was a pretty poor carver and of the tracks he is known to have carved, all show serious anatomic errors, including misplaced ball and arch, and badly shapen toes.

Dr. Don Patton, a latter-day proponent of the mantracks, then entered the dying controversy. One additional argument that had been proposed to discredit the mantrack claims was that no-man could possibly have a footprint 15" long. "Not so," Patton decreed, noting that James Donaldson, a Dallas football player has a foot some 3 inches longer than the Burdick track, (supposedly making his foot over 18 inches long.) Unfortunately Patton had got his facts a little confused. He actually meant James Donalson, a Dallas Mavericks basketball player whose shoe size is an 18, rather than his foot being 18 inches long.

Today, most people have accepted that the man-tracks are, in fact, a variety of misidentified phenomena. Some are forms of 'metatarsal' dinosaur tracks – tracks made by dinosaurs, which at times made elongated prints by impressing their soles and heels as they walked rather than walking on their toes only. Other marks are erosional features and indistinct markings of uncertain origin.

The other artifacts found at the site can be similarly explained. The infamous human tooth actually turned out to be a tooth from a fish. This was announced in the rather uncharitably entitled article 'Creationist's "Glen Rose Man" proves to be a Fish Tooth (As Expected)' (32). The trilobite cannot be confirmed as having come from Paluxy and the hammer again cannot be related to anything.

The mantracks at Paluxy do not provide evidence that man coexisted with dinosaurs, however, the other anomalies such as the Piri Reis map, the Ica stones and pictures of toxodons cannot be so easily dismissed. However, all such accounts of prehistoric artifacts should be treated with some caution, particularly as the actual artifacts themselves are rarely available for scientific inspection; the researcher has to rely on the reports of others and anecdotal evidence. Such dangers are readily evident in the 'discovery' of ancient electric disks high in the Tibetan Mountains.

According to the German Review 'Das Vegetarishe Universum', a Chinese archaeologist Chi Pu Tei discovered a series of graves arranged in rows in caves in the Bayan Kara Uula Mountains on the Chinese-Tibet borders in 1938. The cave walls were apparently decorated with figures in round helmets and the Sun, Moon and stars linked together by groups of small dots.

In these graves Chi Pu Tei and his assistants discovered 716 stone discs with drawings and indecipherable hieroglyphics which appeared to be thousands of years old. The discs had a hole in the centre (like a gramophone record) from which a double groove traces out a spiral to the circumference. They were not sound tracks but a kind of writing. "When finally freed of all incrustations the discs were sent to Moscow where it was found that they contained large amounts of cobalt and that they were rhythmically pulsating as though they had electrical charges in them." (33)

The graves were also something of a puzzle in their own right as Chi Pu Tei stated that they contained the skeletons of beings with delicate frames and large skulls. An account of the discovery was made known to the world in 1967 by Dr. Zaitsev, an apparent Soviet philologist, in the periodical 'Sputnik'. Dr. Zaitsev described how, after twenty years study, a Chinese scientist called Tsum Um Nui and four colleagues had succeeded in deciphering the mysterious script on the stone discs. According to Zaitsev, the story that emerged was so shattering that its release was banned by the then Peking Academy of PreHistory until 1963.

Information gleaned from the deciphered discs stated that a group of alien beings had crash-landed on Earth 12,000 years ago and had neither sufficient power to take off again nor the means to build an alternative craft. They tried to forge relationships with the local inhabitants, however these people proved hostile and some aliens were killed. The remaining visitors hid in the nearby caves. The few that survived left traces of their DNA in two of the local tribes, the 'Kam' and 'Dropa', tribes who are described as small and lightly built.

This story appears intriguing, however what appears historic fact becomes decidedly fanciful when the author of the book where this account first surfaced is mentioned. Erich Von Daniken.

Yes, the discs are there but little else is based on fact. Daniken quotes his source for this story as a conversation in Moscow in 1968 with Soviet writer Aleksandr Kazantsev and records that the discs themselves and the documentation of their discovery is preserved at the then Peking Academy of Prehistory and the Chinese Academy of Sciences at T'ai-Pei in Taiwan.

However over a period of four years, a journalist and expert in linguistics and an-

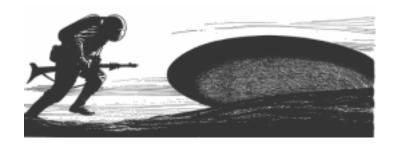
thropology, Gordon Creighton, studied the claims made, and on making further enquiries, drew numerous blanks. Firstly he approached the scientific academies in both T'ai-Pei and Peking for information, however received no response to his enquiries. He then approached a number of Chinese academics for information, but none of them had even heard of the story. Then he contacted the Soviet writer who had given the story to Von Daniken to check whether he had given Von Daniken an accurate account. However the response was not as expected; far from giving Von Daniken the story, Aleksandr Kazantsev stated that Von Daniken had given it to him.

Then the name Tsum Um Nui came in for scrutiny, for not only are the words 'Tsum' 'Um' and 'Nui' not monosyllables used in the transliteration of the standard spoken Chinese, but the person himself has remained unidentifiable, as has the alleged archaeologist who discovered the grave site, Chi Pu Tei. Then the claims that the descendant from the aliens were frail and weak, were realized to be also untrue when it was noted that the 'Kams' are known as marauding bandits who are held in fear by their neighbors. (Indeed the men of Kam provided the bodyguard to the Tibetan Dalai Lama when he fled from the Chinese invasion.) The Dropa are also described as being a rugged and ferocious people (34).

Claims of alien artifacts litter popular history. Project Blue Book, the official US investigation into the UFO and alien phenomena was regularly sent items of purportedly extraterrestrial origin until it was closed down in 1969.

Major Hector Quintanella, onetime head of Project Blue Book, was photographed with such an assortment of items, amongst them were ordinary radio parts and buckwheat pancakes.

Yet despite the myths and the hoaxes, there does appear to be clear evidence that some form of intelligent life roamed the planet in our prehistory. It may be safer, however to confirm a view that this is verifiable fact by looking at some more recent evidence.



THE DESCENT OF MAN

"There is at least one artifact that proves beyond all doubt that one civilization in the ancient world possessed technical knowledge which no modern scientists had previously suspected. As it was found in the sea off Antikythera, a small island north west of Crete, it is known as the Antikythera Mechanism." (1) So wrote renowned author and skeptic Arthur C. Clarke of an artifact that remains a puzzle to our accepted view of world history.

In 1900, on the day before Easter Sunday, a team of divers discovered a In 1900, on the day before Easter Sunday, a team of divers discovered a shipwreck off Antikythera whilst attempting to find sponges. The sunken ship's hull was full of bronze statues and other ancient artifacts that were later retrieved and delivered to the National Archaeological Museum in Athens for cleaning and restoration. It was not until 17th May 1902 that a leading archaeologist examined the artifacts and recognized the outline of cogwheels in one of the lumps of bronze and wood. The writing on the case confirmed that the item had been made in 80 BCE.

In 1958 Derek J. Solla Price, an Englishman who then worked at Cambridge University and who later worked as the Avalon Professor of the History of Science at Yale University in America, examined the mechanism. Using a process for restoring oxidised objects, Dr. Price was able to salvage some of the mass and from these pieces he attempted to rebuild the device. However it was not until 1971 when X-ray photographs were taken of the artifact by the Greek Atomic Energy Commission, that the mechanism's array of meshing gears was finally revealed (2,3). Price remarked that, "nothing like this instrument is preserved elsewhere. Nothing comparable to it is known from any ancient scientific text or literary allusion. On the contrary, from all that we know of science and technology in the Hellenistic age, we should have felt that a device could not exist". (4)

Work on the artifact revealed that on the outside it had consisted of dials set into a wooden box with at least 20 gear wheels inside. The box was covered with inscriptions that included an astronomical calendar. The mechanism also included a system of differential years. A crank spindle set the gears in motion at various speeds, turning pointers

on three dials that calculated the rising and setting times and phases of the Moon, and the positions of the planets Mercury, Venus, Mars, Jupiter and Saturn all with a high degree of accuracy (5). "It appears that this was, indeed a computing machine that could work out and exhibit the motions of the sun and the moon and probably also the planets" Solla Price stated (6).

Arthur C Clarke, wrote of the device in 'Technology and the Limits of Knowledge' in 'The View from Serendip', "Looking at this extraordinary relic is a most disturbing experience. Few activities are more futile than the 'what if....' type of speculation, yet the mechanism positively compels such thinking.

Though it is over two thousand years old, it represents a level which our technology did not reach until the eighteenth century...If the insight of the Greeks had matched their ingenuity, the industrial revolution might have begun a thousand years before Columbus. By this time we would not merely be pottering around on the Moon, we would have reached the nearer stars." (7)

Other artifacts have been discovered that further illustrate that our ancestors enjoyed a degree of technology that should have been unavailable to them. One of the most intriguing of these artifacts has been called the Baghdad Battery.

In the late 1930's Dr. Wilhelm König, a German archaeologist employed by the State Museum in Baghdad was examining a consignment of finds from a settlement that had once been occupied by the Parthians. König wrote "something rather peculiar was found, and, after it had passed through several hands, it was brought to me. A vase like vessel of light yellow clay, whose neck had been removed, contained a copper cylinder, which was held firmly by asphalt.

"The vase was about 15 centimeters high; the sheet-copper cylindrical tube "The vase was about 15 centimeters high; the sheet-copper cylindrical tube with bottom had a diameter of 26 millimeters and was 9 centimeters long. In it, held by a kind of stopper of assault, was a completely oxidised iron rod, the top of which projected about one centimeter above the stopper and was covered by a yellowish grey, fully oxidised thin coating of a metal which looked like lead. The bottom end of the iron did not extend right to bottom of the cylinder, on which was a layer of asphalt about three millimeters deep.

"The question as to what this might be received the most surprising answer. After all the parts had been brought together and then examined in their separate parts, it became evident that it could only have been an electrical element. It was only necessary to add an acid or an alkaline liquid to complete the element. (8)" The Baghdad Battery, was constructed between 248BCE and 266AD making it around two thousand years old.

Confirmation of the artifact as an electric cell came from Dr. Arne Eggebrecht, an Egyptologist from Hildesheim in Germany and from science historian, Willy Ley, working with of the General Electric High Voltage Laboratory in Pittsfield, Massachusetts. Ley constructed a duplicate model of the artifact and discovered that when copper sulphate, acetic acid or citric acid were added, the cells produced between 1.5 and 2 volts of electricity. Generation of electric current by the same means was not achieved by our modern civilization until the early 19th century.

The Baghdad Battery was not a 'one-off' with four similar clay pots containing copper

cylinders being unearthed in a hut near Baghdad. In these pots were thin iron and copper rods which may have been used to connect themselves together to deliver a higher voltage. Ten other cells were also uncovered at Ktesiphon by Professor E. Kuhnel of the Staatliches Museum in Berlin.

Having established that early man knew of, and used electricity, the strange engravings at different locations within the Late Ptolemaic Temple of Hathor at Dendera in Egypt become easier to explain.

In chamber seventeen of this temple, there is a panel that appears to depict Egyptian priests 'operating' tube like devices. Each tube has something extending its full length inside. In the opinion of a classical archaeologist, Dr. John Harris of Ashmolean Museum of Oxford University, there is nothing out of the ordinary in this, and he believes the 'something inside' is an image of a serpent. He argues that the 'snake-stones' were set up on either side of entrances to temples or rooms assigned for a snake cult.

However Swedish writer, Ivan Troëng, who knew little of Egyptian lore, noted in his book 'Kulturer Fore Istiden' that "the picture ... obviously shows electric lamps held by high tension insulators." This idea was explored further by a fellow Swede, engineer Henry Kjellson in his book 'Disappeared Technology' (Published as 'Forvunen Teknik'). Kjellson noted that in the hieroglyphs, these 'snakes' are translated as 'seref', which means to glow. Kjellson therefore concluded that there is some form of electrical current involved in the apparatus depicted. In the scene, to the extreme right there is a box on top of which is sitting an image of the Egyptian god Atum-Ra, which identifies the box as the energy source. Attached to the box is a braided cable which electromagnetics engineer Alfred D. Bielek identified as a copy of engineering illustrations used today for representing a bundle of conducting electrical wires. The cable runs from the box, the full length of the floor of the picture and ends at the bases of the tube objects. These objects each rest on a pillar called a 'djed, which Bielek believes to be a high voltage insulator.

Although some scenes in the upper chambers of the temple have been damaged by vandals, other pictures found in a lower crypt are almost perfectly preserved and further add to the puzzle. In one image, not only are the tubes shown in full operation, but something has been added which may provide a clue to what the tubes were actually for. In several instances, both men and women are shown sitting underneath the tubes, hands held out and cupped, suggesting a receptive mode. It has been suggested that they were engaged in radiation treatment.

As bizarre as this sounds there is supporting evidence in historical scripts for the need for such treatment. The Mausola Parva or Mahabharata, an ancient Indian sacred writing, refers to a thunderbolt 'a gigantic messenger of death' which reduced whole armies to death and caused the hair and nails of survivors to fall out. Pottery broke without cause and birds turned white. Later foodstuffs became poisoned. The Drona Parva, another ancient Indian text, notes "A blazing missile possessed of the radiance of smokeless fire was discharged. A thick gloom suddenly encompassed the heavens. Clouds roared into the higher air, showering blood. The world, scorched by the heat of that weapon, seemed to be in fever." Another passage of the text compares the detonation with a flare of ten thousand suns (9).

Of course this may simply be an account which to modern ears sounds remarkably

like atomic fallout but isn't, yet there is residual supporting physical evidence. For example the surface of the Gobi Desert near Lob Nor lake is covered with vitreous sand the result of China's atomic testing - but the desert had other areas of glassy sand which have been present for many thousands of years. The source of this intense heat in prehistory remain as unknown. There are also ancient burnt stones and boulders in the Sinai desert that have not been adequately explained.

It is difficult to believe that mankind itself possessed atomic technology however there is evidence to suggest that he may have possessed more mundane, but nevertheless still forbidden (time-wise), weaponry. The source of these claims stems from this apparently unremarkable several thousand-year-old skull of an aurochs, a type of bison now extinct at the Russian Paleontological Museum in Moscow. What is remarkable, however, is that in the forehead of the animal there is a small round hole. A hole with an almost polished appearance - and without radial cracks.

It has been suggested that the hole could only have been created by a projectile travelling at a very high speed, and the only natural phenomena that could account for the size and speed would be a small meteorite. Yet such a meteorite would have burnt up long before hitting the ground. Logically therefore, whatever caused the hole must have been artificial in construction.

Given our excepted world history, it is impossible that something artificial could have breached the animal's skull several thousands of years ago. Therefore, there must be a third explanation and the only one would appear to be that, for whatever reason, the skull of the now extinct animal was discovered and injured within last few hundred years. However, this explanation, however bizarre, cannot be true either, for there is no doubt that the aurochs was alive when its skull was breached; the calcification around the aperture is evidence of that. Indeed, the animal survived the wound and died years later from other causes, leaving a significant puzzle.

This discovery of holes in the extinct aurochs is similar to that found in the skull of a 40,000-year-old Neanderthal discovered near Broken Hill in Rhodesia in 1921. On the left of the skull is a perfectly round hole. There are no radial cracks that would have resulted had the hole been caused by a weapon such as an arrow or a spear. Again, only a high-speed projectile such as a bullet could have caused the aperture.

Indeed, further evidence of the bullet theory comes from the fact that the skull area directly opposite the hole is shattered, having been blown out from the inside. No projectile slower than a bullet could have produced either the neat hole or the shattering effect and a German forensic scientist from Berlin has confirmed that the cranial damage to the skull could not have been caused by anything but a bullet.

It could be argued, that someone, for some reason, decided to shoot the skeleton leaving behind only a minor mystery, or, as opposed to the aurochs (which is known to be extinct), the skull is not as old as it is claimed to be. Neanderthal man's skull, however, cannot be easily mistaken for modern man's style, and this skull in particular, has been exhibited at the Museum of Natural History in London, where a mistake is unlikely to have been made. The skeleton was also found 60 feet below the surface; only a period of several thousand years could account for the accumulation of such a deposit.

As with the mysteries detailed in the previous chapter, these puzzles appear out of context with our knowledge of world history, again suggesting that perhaps our history should be rewritten to accommodate all known facts, not just the ones that fit comfortably into our accepted view and understanding.

A rewriting of history becomes all the more pressing when we look back beyond the dark-age; for when we do so it suddenly becomes apparent that modern man has only recreated what has gone before and any pride on building a 'sophisticated' world should be replaced with a degree of puzzlement at how we lost our earlier knowledge, skills and technologies. Far from making steady progress, the last 12,600 years actually appears to represent the descent of man.

This can be demonstrated in many ways and should actually come as no surprise for many of the problems we face in organizing our lives and society are timeless; they were as pertinent thousands of years ago as they are today. For example, the ancient Romans would change their street arteries to one way during peak traffic hours, and the city of Pompeii used arm-waving traffic policemen to cope with the congestion. Street signs were used in Babylon more than two and a half thousand years before the present, with catchy names such as 'The Street On Which No Enemy Ever Tread'.

We now know the ancient city of Antioch was the location of the first street lighting known in history and that the Aztecs set a permanent colored strip directly into the paved road in order to divide the two lanes of traffic (whilst our roads only have painted lines to achieve the same effect.) Excavations at Mohenjo Daro, Harappa and Kalibanga in Pakistan and India also show that town planning was in existence 4,500 years ago; the streets of these ancient cities were straight and the blocks rectangular. A complex water supply and drainage system was also discovered.

Similarly there is evidence of a complex underwater system in the ancient ruins of Chavin de Huantar high in the Peruvian Andes, dating to 500 BCE. At ruins of Chavin de Huantar high in the Peruvian Andes, dating to 500 BCE. At its peak, Chavin de Huantar covered 105 acres and its population numbered around 3000, an unusually large size for Peru at the time (10).

Archaeological constructions of the main ceremonial area of the site show a series of temples that rank amongst the oldest in the world, with one principle temple (11). Under Chavin de Huantar lies a network of finely constructed stone channels that drew water from a nearby river and carried it underneath the site by way of a sophisticated hydraulic system (12).

Four thousand years ago wealthy Koreans had Spring Rooms warmed by hot air, which circulated in vents under the floors, and the Romans used a similar design. (Recent central heating was only invented towards the end of the 17th Century by Bonnemain and perfected by Duvoir.)

At the same time in history private toilets with a central system of stone drains and ceramic pipes were common in the city of Knossos, Crete. Similarly the rooms of the Palace of Minos were ventilated through air-shafts. With its air-conditioned chambers, excellent bathrooms and toilets, the palace was not only modern in the way it was equipped, but also very large; similar in size to Buckingham Palace. Pipes for hot and

cold water have also been found in tiled bathrooms at Chan Chan in South America a time when such comforts were unheard of in Europe.

Not only did the infrastructure of some buildings compare favorably with modern day equivalents, but also their furnishings: The prehistoric city of Catal Huyuk in Turkey is over 8,500 years old, yet pieces of carpet have been found in the ruins that could compete well with the best woven carpets available today. Such skills were equally evident in a discovery made by Professor Luther S. Cressman of the University of Oregon who came across two hundred pairs of skilfully made woven-fibre sandals in Lamos Cave in east Nevada. When a carbon-14 test was made, the sandals were found to be well over 9000 years old (13).

History also records how mankind possessed a medical knowledge not previously suspected. An excavation of mummies from the Valley of the Kings in Egypt found that many of the jaws of the mummies had bridges and artificial teeth (14). Similarly Mayan skulls dug up on the coast of Jaina in Campeche, Mexico also show crowns and fillings in place (15).

Recent discoveries have also shown that Pre-Inca surgeons performed operations on the brain 2,500 years ago. Trepanation is a fairly recent development in modern medicine, yet thousands of skulls in Peru show marks of such successful surgery. When the same operations were attempted at the Hotel Dieu in Paris in 1786, the operations were invariably fatal. Medical knowledge was widespread in our ancient times. Sushruta (5th Century BCE) listed the diagnosis of 1120 diseases. He described 121 surgical instruments and was the first to experiment with plastic surgery (16).

The Sactya Grantham, a Brahmin book compiled about 1500 BCE contains the following passage describing the giving of a smallpox vaccination. "Take on the tip of a knife the contents of the inflammation, inject it into the arm of a man, mixing it with his blood. A fever will follow but the malady will pass very easily and will create no complications. (17)" Modern history, however, claims that Edward Jenner (1749-1823) discovered the practise of vaccination.

There are also hints of more intriguing medical advancements. The Chinese Emperor Tsin-Shi (259-210 BCE) reportedly owned a 'magic mirror' which could illuminate the bones of the body. When a patient stood before this rectangular mirror which measured 1.76 by 1.22 meters in size, the image appeared reversed but all the organs and bones were visible – an apparent reference to an x-ray machine. The 'magic mirror' itself was reportedly used to diagnose disease (18).

In fact the Chinese appear particularly knowledgeable when it comes to medicine. A Chinese surgeon, Hua T'o carried out operations under anaesthetic over 1800 years ago. The chronicle of Hou Hou Shu of the later Han Dynasty (25-220 AD) reports as follows; "He first made the patient swallow hemp-bubble-powder mixed with wine, and as soon as intoxication and unconsciousness supervened, he made an incision in the belly or the back and cut out any morbid growth. If the stomach or intestine was the part affected, he thoroughly cleansed these organs after the use of the knife, and removed the contaminating matter that had caused the infection. He would then stitch up the wound, and apply a marvellous ointment which caused it to heal in four or five days, and within a month the patient was completely restored to health (19)."

Of one of the most puzzling discoveries suggesting lost knowledge came to light in China on 1st December 1993 when a workman's spade broke through the roof of a long buried and forgotten tomb. Work was being undertaken to build a sports field for the Jingyi Middle school of Yix-ing City in the Jiang-su Province of China at the time. The police were called in and recognizing the find as a tomb, called in the Huadong Historical Relics Working Team who conducted a full-scale investigation. The tomb was later identified as the burial site of a famous general of the Chin dynasty, Chou Chou who lived from 265-316 AD.

In the tomb were found pieces of pottery, porcelain, scraps of gold and a metal belt fastener. The fastener was examined by the Institute of Applied Physics of the Chinese Academy of Sciences and by the Dunbai Polytechnic. Their analysis showed that the metal of the fastener was an alloy of 5% manganese, 10% copper - and 85% aluminium. The mystery here being that aluminium was not supposed to have been discovered until 1803 and had certainly not been produced successfully in pure form until 1854. Even today, the process of extracting aluminium from bauxite is complicated and involves the use of a Reverbier oven, a refraction chamber and regenerator as well as electrolysis and temperatures exceeding 950° Celsius.

The mystery artifact became known as the Nanjiig Belt and sparked off a wave of controversy, which came to an initial end with the Chinese Cultural Revolution of the 1960s. However by that time, western scientists had obtained data on the belt, notably Dr. J. Needham of Cambridge University, author of 'Science and Civilization in China.' Other researchers followed his lead and in December 1986 a report entitled 'Aluminium Objects from a Jin Dynasty Tomb - Can They Be Authentic?' was published by scientists at the Chemistry Department of the University of St. Andrews, Scotland.

By this time stories were beginning to circulate that the belt had been dropped more recently by robbers. The scientists at St. Andrews, however, dismissed this; "It is difficult to see why they should have left the silver objects in place and carefully inserted pieces of aluminium for the confusion of future excavators. A tomb robber is scarcely likely to have scraps of kitchen utensils about his person and to have discarded them accidentally. It would also need a miraculous breeze to replace the dust." (20)

However, despite dismissing the grave robber theory, they introduced their own hypothesis, as they could not account for aluminium being in existence nearly 1500 years ago. "We are led to suggest," they concluded, "that the aluminium was introduced at an academic prank by a participant who was probably greatly embarrassed when he realized the consequences of his actions. (21)"

Despite this guess, for it is no more than that, no academic has come forward to support this theory and the mystery remains. As Arthur C. Clarke comments, "the mystery of the ancient Chinese aluminium belt has worried me for years. Technologically, such an artifact would be almost as anomalous as a medieval transistor radio". (22)

Yet there are other indications of ancient knowledge of metalworking. In the courtyard of Kurb Minar in Delhi India stands the Ashoka Pillar, a column of cast iron weighing approximately six tons and standing 23 feet eight inches high, with a diameter of 16 inches. The column had stood in the Temple of Muttra, capped with a Garuda - an image of the bird incarnation of the god Vishnu. Muslim invaders later destroyed the Garuda and

ripped the column from its original setting, re-erecting it in Delhi in the eleventh century. The exact age of the column is not known however it bears the inscription of an epitaph to King Chandra Gupta II who died in 413AD signifying that it is at least 1500 years old.

The mystery of the pillar, however, is not its age, nor even its immense size (suggesting a sizeable casting job) but the fact that a piece of iron manufactured around fifteen hundred years ago and subjected to the Indian monsoon rains, winds and temperatures should have corroded and disappeared long ago. The column, however, shows only traces of rust and suggests a technology was available to its makers that is now unknown (23).

Another iron column exists at Kottenforest, a few miles west of Bonn, Germany. Known locally as the Iron Man, it is 4 ft 10 inches above ground and an estimated 9 feet beneath the surface. This column was first mentioned in a fourteenth century document where it was described as marking a village boundary, but there is evidence that it is much older. For associated with the Iron Man is an ancient stone walkway, and the remains of an aqueduct that runs straight towards the column. Again, like the pillar in India, the Iron Man shows only scant traces of rust (24).

On the other side of the world there is also evidence of ancient metal working knowledge. Pre-Inca Peruvian ornaments and other objects made out of platinum have been discovered, yet in order to melt platinum, a temperature of c.1755° Celsius is required, and there is no satisfactory answer as to how the ancient Peruvians were able to produce such an intense heat (25).

The ancient Palestinians also appeared to have knowledge of metal hardening techniques. Professor Clifford Wilson, while working for the Australian Institute of Archaeology, noted that one leg of a Palestinian bronze statue of Baal was missing, and when metal workers were commissioned to add a modern one, they were surprised that they could not duplicate the original bronze as it was harder than any they could make (26).

Ancient advanced technologies are evident elsewhere. In 1898 a small model plane was discovered in a tomb near Saqqara, Egypt and was dated to approximately two hundred BCE. At the time of its discovery, the birth of modern aviation was still several years away. The model was sent to the Cairo Museum of Antiquities and was catalogued as Special register No. 6347 Room 22, and then promptly forgotten about.

Just over 70 years later, when man had travelled to the Moon, Dr Kalil Messiha, an Egyptologist and archaeologist, came across the model in a box marked 'bird objects' when he was clearing out the museum's basement. The other items in the box were clearly bird figurines, but the model stood out as being different, having characteristics that appeared to resemble parts of a modern aircraft.

Messiha persuaded the then under-secretary of the Egyptian Ministry of Culture, Dr. Mohammed Gamel El Din Moukhtar, to form a committee to investigate the model. The committee was duly established on 23rd December 1971 and consisted of a number of historians and aviation experts.

They established that the model's wings were straight and aerodynamically shaped with a span of 7.2 inches. The pointed nose was 1.3 inches long and the body of the craft

measured 5.6 inches in length, tapered and terminating in a vertical tail fin. A separate slotted piece on the tail was precisely like the back stabilizer section of a modern plane. The craft was made of sycamore wood and weighed 1.11 ounces (27).

When asked to analyze the model, several aerodynamics engineers and pilots found that the plane demonstrated a knowledge of aircraft design that had taken European and American designers decades of airfoil experimental work to discover and perfect. The fuselage and wing was of an aerodynamic shape which demonstrated design compensation for camber, and the wing itself was found to be counter-dihedral, providing a powerful lift force. Another feature the experts discovered was that all of its highly accurate integral proportions were present in ratios of 2:1 or 3:1. It appears that the ancient model was the product of significant computation and experimentation.

It could be argued that all this is too much to read into one ancient model however more recently several other such models have been uncovered from other tombs. More significantly, as Dr Messiha reminds us, the ancient Egyptians always built scale models of everything they made, with their tombs filled with small detailed temples, obelisks, houses, chariots, ships etc. Perhaps a full sized plane is waiting beneath the desert sands ready to be discovered.

Flying craft also feature in ancient texts from around the world. Dr. Benjamin Olshin wrote in his 'Mechanical Mythology: Private Descriptions of Flying Machines as Found In early Chinese, Korean, Indian and Other Texts', "In various kinds of Asian and South Asian texts, we find references to flying machines and aerial vehicles. Chinese and Indian stories tell of peoples or individual artisans who constructed devices for travelling through the air. The stories take many different forms, including quite fanciful romances. Others present a picture of inventors taking pains to understand the basic principles of flight, and crafting machines of wood to achieve this goal." (28)

The mathematical skill demonstrated in the design and construction of the Egyptian glider serves as a reminder of the extent of mathematical and other knowledge available to ancient man, and only 'rediscovered' in the last few hundred years.

Pythagoras (6th Century BCE) taught in his school in Crotona that the Earth was a sphere. Aristarchus of Samos (3rd Century BCE) realized that the Earth span round the sun and he even added that all the planets did likewise.

Eratosthenes (3rd Century BCE - left), the custodian of the Alexandria Library, worked out the circumference of the planet. He noted that due south at Syene the sun was directly overhead on midsummer's day and seven degrees from vertical at Alexandria on the same day. From this and knowledge of geography he was able to work out the figures he required. There was a discrepancy of only 80km between his figure for the polar diameter and the modern figure.

"The Earth spins on its axis once in 24 hours." Heraclides of Pontus noted in the 4th Century BC. Seleucus of Erythrea (2nd Century BCE) also recognized the rotation of the Earth and its orbit around the sun.

Up until Victorian times, scholars and clerics in the west believed that the Earth was only a few thousand years old, yet ancient Brahmin texts estimated that the universe was 4,320 million years old; today we believe it to be around 4,600 million years.

The ancient Indian astronomical text Surya Siddhanta recorded that the Earth 'is a globe in space'. In the book Huang Ti-Ping King Su Wen, Chi-Po advised the Yellow Emperor (2697-2597 BCE) that 'the Earth floats in space'. Over four thousand years later, Galileo was condemned for proposing such heresy. Plutarch cites Aristarchus (3rd Century BCE) "The earth revolves in an oblique circle while it rotates at the same time about its own axis." (Plutarch also made a suggestion about our Moon: "If you regard her as a star or a certain divine and heavenly body, I am afraid she will prove deformed and foul.")

The ancient book of India, Rig-Veda makes reference to the 'three earths' one within the other. Indeed there are three sections to the Earth; the core, mantle and crust. Diogenes of Apollonia (5th Century BCE) stated that meteors "move in space and frequently fall to the earth". Yet the respected 18th Century scientist, Lavoisier, stated what appeared to be the obvious, "it is impossible for stones to fall from the sky because there are no stones in the sky."

The extent of our ancient knowledge is hinted at when texts such as the so called 'Emerald Tables of Hermes' are considered. The exact dating of this document is unclear, however whilst some date it from the Middle Ages, others such as 18th Century scholar, Dr. Sigismund Bacstrom consider that the Emerald Tables date back to 2500 BCE. The Tables begin "What is above is like what is below, and what is below is like what is above to effect wonders of one and the same work." Researchers have interpreted this as meaning there is a mirror-like similarity between the world of the atom, with electrons spinning round protons as planets spin around suns, and stars and galaxies.

"Separate the earth from the fire, the subtle from the gross, carefully and skilfully. This substance ascends from the earth to the sky, and descends again on the earth – and thus the superior and inferior are increased in power." This section of the tables has been interpreted as the process of splitting the atom and the associated dangers.

A further paragraph of the tables indicates an ancient belief in the vibratory character of matter and the waves and rays that penetrate all substances, "This is the potent power of all forces for it will overcome all that is fine and penetrate all that is course because in this manner was the world created. (29)" Of course, all texts are open to interpretation and misinterpretation, yet if the above interpretations were accurate, they certainly would not stand out in isolation from other contemporary knowledge.

Democritus stated nearly two and a half thousand years ago "in reality there is nothing but atoms and space."

Lucretius, a 1st Century BCE Roman scholar wrote about atoms "rushing everlastingly throughout all space". They undergo "miriad changes under the disturbing impact of collisions". He also noted that it is impossible to see atoms as they are too small.

In his 'On the Nature of the Universe' Lucretius gives his opinion that "there can be no centre in infinity" and "the way up and the way down, are one and the same (30)." Zeno of Elea (5th Century BCE) demonstrated an awareness of relativity with this puzzle, "If the flying arrow is at every instant of its flight at rest in a space equal to its length, when does it move?" (31)

The atomic structure of matter is also mentioned in the Brahmin treatises Vaisesika and Nyaya. The Yoga Vasishta states "There are vast worlds within the hollows of each atom, multifarious as the specks in a sunbeam." Philolaus (5th Century BCE) referred to an 'antichthon' or anti-earth, an invisible body in our solar system, however it is only recently that the concepts of antimatter and parallel worlds have been introduced to modern science. Plato wrote in the Statesman about an oscillating universe periodically reversing its time arrow and sometimes moving from the future into the past (32).

The Brahmin texts also shed light onto man's ancient knowledge by their divisions of time. Last century in parts of northern England and elsewhere, clocks often did not have a minute hand, the hour hand sufficing. After all, until the busy and hectic twentieth century, the counting of minutes was somewhat superfluous. Yet the Siddhanta-Ciromani subdivides the hour until it arrives at the truti, equivalent to 0.33750 of a second. Not only are we unaware of why such a small measure of time was required in antiquity, but we are also unable to explain what could have measured such timescales with that degree of accuracy (33).

According to the Pundit Kaniah Yogi of Ambattur, Madras, the original time measurement of the Brahmins was sexagesimal. The day was divided into 60 kala, each equal to 24 minutes, subdivided into 60 vikala, each equivalent to 24 seconds. Then followed a further sixty fold subdivision of time into para, tatpara, vitatpara, ima and finally kashta. The kashta was 1/300 millionth of a second! (Incidentally, 1/300 millionth of a second is close to the life span of certain mesons and hyperons.) Who or what required the ancient Hindus to be able to measure time with this degree of accuracy, and why?

The Mayas, or perhaps their predecessors, the Olmecs, came closest to calculating the exact length of the solar year, a measurement only known to our civilization, fairly recently. The correct measurement is 365.2422 days. The Mayas, however, calculated it as 365.2420 days, hardly any difference.

Modern man has only recently become aware of much of this knowledge - a knowledge so freely available to our ancient ancestors. But how? How could man at the beginning of time as we know it, have such an accurate understanding of mathematics and 'latter day' scientific concepts? Perhaps it is the pyramids after all that provide the clue, for pyramids constructed after the Great Pyramid itself (if it is accepted that it should be redated to an earlier epoch) demonstrate an alarming fall in mankind's knowledge and ability. It is difficult to understand how a people who constructed the structure on the Giza plateau with its mathematical marvels, could soon after go on to construct a failure such as the structure at Dahshur above; a pyramid that bent in on itself in order to prevent collapse. It would make more sense if rather than the Great Pyramid being built at the beginning of time, it was built at the end of a former time, with the knowledge of this former time becoming dissipated through the subsequent centuries. This would also account for the 'fall-off' of scientific, medical and other knowledge and achievements.

These then are examples from the historical record suggesting a former knowledge now lost. By themselves they present a powerful case, however if legends of old are also sifted for information, a further delicious insight into the world of ancient man can be discovered. And even if these stories are purely fictitious, then they at least provide an insight into the creative and inventive minds of our forefathers.

Such legends can be found in most civilizations. According to those of the Greeks, Haephestus the 'Blacksmith of Olympus' made two golden statues that resembled living young women. They could move of their own accord and hastened to the side of the lame god to aid him as he walked. If nothing else, the story shows that the concept of automation was present in ancient Greece (34).

In China, the description of a mechanical man is contained in the story of Emperor Tachouan. His empress found the statue so irresistible that the jealous ruler of the Celestial Empire gave orders to the constructor to break it up in spite of all the admiration that he himself had for the walking robot.

The legendary Daedalus, father of Icarus, is reported to have constructed humanlike figures, which moved of their own accord. Plato, who gave us the story of Atlantis, says that these robots were so active that they had to be prevented from running away (35).

Albertus Magnus (1206-1280 - left), the Bishop of Regensburg explained the Milky Way was a conglomeration of distant stars. He was later canonized by the Catholic Church, and wrote extensively on chemistry, mathematics and astronomy. He reported that over a period of twenty years he constructed an android composed of "metals and unknown substances chosen according to the stars (36)." The mechanical man apparently walked, spoke and performed domestic chores... and spoke. In fact it was reported to never shut up to the point when Albertus' pupil, Thomas Aquinas, one day grabbed a hammer and smashed the machine to pieces.

In classical times the Romans in Egypt described the singing statute of Memnon erected about 1500BCE. Musical sounds were heard when the rays of the rising sun illuminated its head. In AD 130 the Roman Emperor Hadrian listened to this singing monument one morning and heard the sounds three times. Emperor Septimus Severus (AD 193-211) also heard the chants. However an accident befell the statue and after repairs the "music stopped" suggesting that something was damaged during the restoration work (37). This statue can still be seen in Egypt today.

The Phoenician Sanchuniathon (c. 1193BCE) and Philo Byblos (AD 150) spoke of 'animated stones'. The Christian historian Eusebius (c. AD260-340 - right) apparently carried one of these mysterious stones on his chest. The stone reportedly answered questions in a small voice resembling a 'low whistling' (38). Arnobius (died c. AD 327), another Christian Father, confessed that whenever he got hold of a 'speaking stone' he was always tempted to ask a question of it. The answer would come back in a 'clear and sharp voice' (39). The descriptions of these stones make them sound similar to communication devices.

The Bible mentions also 'teraphim' or images, figures or heads that answered questions (40). Maimonides (1135-1204) in Les Regles des Moeurs says that "the worshippers of the teraphim claimed that as the light of the stars filled the carved statue, it was put en rapport with the intelligences of those distant stars and planets who used the statue as an instrument. It is in this manner that the teraphim taught people many useful arts and sciences (41)."

The idea of devices that allowed man to see other places frequently occurs in an-

cient legends. For example, the Book of Enoch states that Azaziel taught men to make mirrors, and according to this belief, distant scenes and people could clearly be seen in them (42).

Maxim Gorky, the Russian writer, met a Hindu Yogi in the Caucasus. This Hindu asked Gorky if he wished to view something in his album, to which Gorky replied that he wished to see pictures of India. The Hindu allegedly put the album on the Russian's knees and requested that he turn the pages. The polished copper sheets then showed beautiful cities, temples and landscapes of India. At the end of the session Gorky returned the album to the Hindu. The Yogi blew on it and asked whether Gorky wished to take another look. Gorky states that "I opened the album and found nothing but copper plates without a trace of any pictures (43).

Franciscus Picus in the Book of the Six Sciences outlined the construction of the 'Al Muchefi mirror'. It is said that in this mirror one could see a panorama of time.

Whilst these latter accounts appear to be in the realms of science fiction, they seem remarkably out of place with our concepts of the ancient world. And as the world became even older, this knowledge ebbed away, becoming lost in the depths of time. It could reasonably be assumed that a world that was developing would have built upon knowledge attained; a world in decline would have seen its knowledge base crumble and fall into disrepair. (Of course, the knowledge could simply have been borrowed rather than developed, of which more later.)

Ulug Beg, a 15th century Uzbek astronomer held a view that "mosques fall, palaces crumble into dust, but knowledge remains." However, he was not as clever as he thought, for, as a punishment for making this statement, he was sent on a pilgrimage to Mecca, and was then murdered on the journey as a warning to others. Plato held a different view believing that when knowledge was lost "you have to begin all over again as children." And history records the loss of much knowledge through the centuries, including the wanton destruction of great libraries.

These incidents include the devastation of Persepolis, the capital of the Persian Empire, which was torched when conquered by Alexander the Great. The Romans also destroyed ancient Phoenician and Carthaginian books when they ransacked the library of Carthage in 146 BCE and their own records were subsequently destroyed during the later sacks of Rome and the pillaging of Constantinople.

Julius Caesar accidentally destroyed thousands of books when he captured Alexandria, and although the destruction was not complete, it became so later when Omar, the third Caliph of Islam, ordered that the library's books be used for heating the public baths following his conquest of the city in 636AD. Some idea of how much ancient knowledge was lost becomes apparent when it is noted that the books kept the baths hot for six months.

The Caliph had his own reasoning for this act of vandalism, reportedly decreeing "the contents of these books are in conformity with the Koran or they are not. If they are, the Koran is sufficient without them; if they are not they are pernicious. Let them, therefore, be destroyed (43)."

Other parts of the world witnessed similar destruction. Shih Huang Ti, the unifying

Emperor of the Chin Dynasty decided that Chinese history should start with him. To that end he ordered that all books should be burned, including those of Confucius, except those dealing with medicine, agriculture and necromancy.

Other ancient records have been destroyed. Bishop Diego de Landa in Yucatan in the early sixteenth century had all the Maya chronicles he could find burned, and by doing so probably destroyed any hope of modern researchers deciphering the ancient Mayan hieroglyphics that adorned the few ancient texts that did survive his vandalism.

These destructions have robbed modern man of an understanding of much of his past, leaving merely a confusing trail of out of place artifacts, archaeological remains and ancient texts. Yet these clues themselves appear to provide overwhelming evidence that mankind enjoyed an earlier period when s/he had a greater knowledge than s/he had in subsequent millennia. From the stones at Ica, the Antikythera Mechanism, the Nanjiig Belt to the early understanding of the Earth's place in the solar system and universe, to the mathematics and construction of the Great Pyramid, to the marvels of Tiahuanaco, it is clear that someone, somewhere at sometime lived on this planet whose very existence is now lost to us. Given that clues to the existence of this lost people scatter the Earth, it could be assumed that we are searching for an entire civilization.

And if clues to this missing civilization really are to be found around the entire planet then there should be evidence of worldwide prehistoric connections. And there are.

The most remarkable of these connections centres on the links between Easter Island and the Indus Valley in Pakistan. (If the Earth was shrunk to rest on the palm of your hand and you inserted a needle into Easter Island then through the centre of the Earth, the needle would come out of the other side of the planet in the vicinity of this valley.)

Easter Island, itself, lies in the Pacific Ocean, 2300 miles west of the coast of Chile and some 2500 miles from Tiahuanaco (44).

The island is only 45 square miles in area, but is known across the world because of the mysterious statues that stand around its coastline on stone platforms.

The origin and purpose of these statues has never been satisfactorily explained, and because they are made of stone, their age can never be established.

What we do know, however, is that the hats and chiselled features of the Easter Island statues bear an uncanny resemblance to statues found on the South American mainland at Tiahuanaco.

Alan Alford in his 'God of the New Millennium' points out the similarity between these South American statues and others found in Aija in Peru, and the similarity between those (below left) and the depiction of an Indo-European ruler from the Indus Valley (below right.)

This latter connection may seem somewhat tenuous (although the headbands on each statue provide the most convincing evidence), but there is other supporting evidence of a prehistoric link between Easter Island, South America and the Indus Valley.

The valley itself hosts the great cities of Harappa and Mohenjo-Daro; cities thought to be 4500 years old, predating the historical society of India. The Indus Valley culture came to a sudden end in about 1500BCE when India. The Indus Valley culture came to a sudden end in about 1500BCE when invaders from the north ransacked the area.

The speed of this demise is demonstrated by the fact that skeletons of slaughtered inhabitants have been found preserved at the old street level (45). Along with their destruction went our potential for understanding their ancient script, for their writings are now indecipherable, with their language disappearing along with the extinction of those who spoke it.

Yet these people left behind a mystery for us to contemplate. We know they had a distinct script for many of the letters or syllables have survived on seals and other documents. What is remarkable is the similarity of these symbols with those found on the 'rongo-rongo' boards or carved on rocks on Easter Island, the opposite side of the world

There are other examples of apparent connections between ancient peoples. Such examples include the Chinese style frieze motifs found at El Tajin and other sites in Mexico, which have a close resemblance to ancient designs from the earliest Chinese dynasties (Hsia, Shang and Ch'ou 2000 to 250 BCE.)

The top of these two decorative borders is from the early Ch'ou Dynasty in China, the lower decoration from El Tajin in Mexico.

The similarities, including the use of the double line for emphasis and the curved 'tiger tufts' appear too exact to be merely coincidental. (46)

The Olmecs leave further evidence of the global wandering of ancient man. The Olmec culture can be dated to c. 1500 BCE and although little is known of their existence, James and Oliver Tickell refer to their "complex calendar from astronomical observation that underpinned their religion, mathematics and science (47)."

Our interest in the Olmecs here stems from the carved heads they left in Mexico. Quite clearly the statues show Negroid features, and yet Negroes were supposedly unknown in the Americas until the voyage of Columbus, just as cocaine was supposedly unknown to the Egyptians, despite traces being found in the bodies of a number of Pharaohs.

In 1952 another find was made that indicates that ancient man wandered far and wide across the surface of the planet. This was the discovery by Dr. Daniel Ruzo of megalithic sculptures in Marcahuasi. Marcahuasi itself is about 80 kilometers north of Lima in Peru and is a plateau at an altitude of 4000 meters, where the air is cold and the landscape barren.

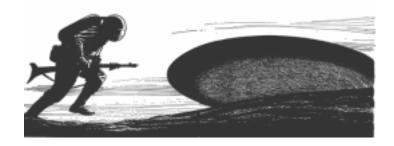
There, Ruzo discovered huge figures of people and animals carved out of stone. Lions, cows, elephants and camels, which had never lived in the Americas, surrounded him. He also noted an amphichelydia - an extinct ancestor of the turtle, known only by its fossilized remains.

There was also a sculpture of a horse, yet the horse died out in America around 9000 years ago, reappearing in the 16th Century when the conquistadors brought it with them from Spain. There is one obvious answer to this puzzle; the sculptures are simply from the past few hundred years. Yet geologists have analyzed the white dioritic porphyry from which the heads were carved, and conclude that the stone would have needed at least 10,000 years to take on the grey tint it now shows in the cuts (48).

Then in 1962 on a rocky cliff west of Alice Springs in the heart of Australia, Michael

Terry discovered a carving of the extinct Nototherium Mitchelli. This rhinoceros-type animal had disappeared some 2,500 years ago. In the same place he found six carvings of what appeared to be ram's heads (49) and yet rams were supposedly unknown in Australia until the arrival of the English.

It seems that whoever these people were, they knew how to travel, having left behind numerous clues to their wanderings. So who were these people and where did they live?



THE SEARCH FOR LOST CIVILIZATIONS

Nearly all of the 'lost civilization' theories have become associated with the legend of Plato's 'Atlantis', thus the concept and its study have been largely ignored by the serious academic community.

Yet ironically it is probably the legend of Atlantis itself, however fanciful, that has provided the foundation for the belief in the existence in a prehistoric civilization to account for the out-of-place knowledge and artifacts detailed in previous chapters.

Atlantis was first mentioned by Plato in his work, the 'Timaeus', in which he detailed the mighty island of Atlantis and its proud peoples who, is the course of "a single day and night" were swept by earthquake and flood into the depths of the ocean.' Despite his pupil Aristotle's belief that the story was fantasy, invented to moralize on the nature and consequences of human ambition, Plato was adamant that the former existence of Atlantis was a matter of historical fact.

Whatever the truth, the legend certainly was considered factual for many centuries with even mediaeval sea-charts showing unknown 'Atlantis' islands.

Yet if there was a 'lost civilization' (regardless of its connection with or not to the Atlantis legend) it would have had to have had a home, and any identified location would have to provide supporting evidence that a civilization actually did live there, for, as Egyptologist Mark Lehner rightly points out, without evidence of remains, it would be safer to conclude that there was no former civilization, and the purported clues to its existence would have to be explained in some other way.

Many locations for the lost civilization have been suggested with many of them centering on the Mediterranean area. A Dr. James Mavor set out one theory in his 1969 book, believing that the lost peoples were a Minoan civilization. This followed earlier claims first set out in the 1930s by Greek scientists Dr Angelos Galanopoulos and Professor Spyridon Marinatos.

There is certainly some evidence to support Thera, an island near Crete in the Mediterranean, being the location of an early civilization. Professor Marinatos, under the auspices of the Archaeological Society at Athens, began a systematic excavation of a town on the island, Akrotiri in 1967, after evidence of early habitation had been discovered there in the second half of the 19th century.

These excavations confirmed that Akrotiri had been one of the most important prehistoric settlements of the Aegean, and the various imported items discovered indicated

a wide network of external relations. Not only as Akrotiri in contact with nearby Crete but it also communicated with mainland Greece, the Dodecanese, Cyprus, Syria and Egypt.

However, it appeared that the town's life came to an abrupt end in the last quarter of the 17th century BCE when the inhabitants were forced to abandon their homes as a result of severe earthquakes. An eruption of the island-volcano Thera followed, with volcanic materials covering the entire island and the town itself, preserving the buildings and their contents forming an intriguing time capsule just like as at Pompeii.

Despite evidence of early civilization, the evidence was not early enough, with the first signs of habitation being from the late Neolithic times (c. 4th millennium BCE.) Attention therefore turned to Crete itself, Thera's much larger neighbor, and a popular choice for the home of the 'missing' civilization.

A ceramic disc had been found at Phaistos on Crete which was around 3700 years old, however made from a clay not indigenous to the island, indicating that Crete had certainly been visited by that time. Indeed, other evidence suggests that the island was in fact occupied at least by 6000BCE; indicating the existence of a sea faring people who had boats that could be rowed out into open sea.

Whenever the civilization started, history records that by 1500BCE Crete had become the centre of a seafaring empire. However, within a very short time, this empire collapsed along with its infrastructure. In all probability this collapse was caused by the eruption of a volcano that destroyed the nearby island of Thera and also deposited layers of ash that would have destroyed harvests for decades. The eruption is also known to have triggered off a substantial tidal wave.

These events appear to fit the story handed down by Plato of the island paradise, Atlantis. Indeed the volcano at Thera erupted exactly 900 years before Solon received the original story of Atlantis from Egyptian priests leading to some concluding that Plato might have got his figures wrong; he should have referred to Atlantis being destroyed 900 years previously, not 9000 years. There were other indications that Crete could have been the legendary Atlantis. Crete was well known to the Egyptians as 'Keftui,' a land that was "the way to other islands and the continent beyond" exactly as Plato described Atlantis.

Not so, retorted Dr. Jurgen Spanuth, who was familiar with Plato's account of Atlantis. "Neither Thera nor Crete lies in the Atlantic ... Neither island lies at the mouth of a great river, neither was swallowed up by the sea and vanished ... in fact this great breakthrough in archaeology is a bubble that burst long ago."

Spanuth wasn't having any nonsense about some mythical lost continent lying somewhere in the Mediterranean. Absolutely not. No, as far as he was concerned, Atlantis was to be found on the sunken islands near Heligoland off the northwest German coast.

He attempted to prove his theory in his 1976 book 'Atlantis of the North' but, of course, could not.

History advises us of other submerged archaeological remains in the European area. Pliny the Elder and Strabo make reference to the Etruscan city of Spina in the Adriatic, which was once a thriving metropolis of trade and culture, but now completely sub-

merged. Similarly, Dioscuria, an ancient Greek port of considerable size is now beneath the surface of the Black Sea. (1)

Other nominations for the location of 'Atlantis' within the Mediterranean have included a site off the coast of Morocco where scuba divers chasing fish discovered a well-built 9-mile long under water wall traversing an underwater mountain. These ruins were investigated by Dr. J Thorne who also noted the existence of roads going still further down the mountain into the inky depths of the sea.

However, T C Lethbridge, a Cambridge archaeologist and psychical researcher, believed that the missing civilization's home could have been located at Tartessos, which lay between two rivers in southern Spain, just outside the straits of Gibraltar (the Pillars of Hercules.) It is believed that the Carthaginians conquered this rich and civilized city before being destroyed by the 6th Century BCE, however it was reported to have written records that went back to 6000 year before its disappearance (2).

However, despite these romantic notions, there is no real evidence that Europe or its environs could have been the location of the missing civilization. Indeed Plato, who had suggested the idea of an Atlantis, had actually stated that the alleged colony lay beyond the 'Pillars of Hercules' at Gibraltar. And there appears to be some evidence that it may well have done.

The Azores are a group of islands lying 'beyond Gibraltar' that have frequently been proposed as a possible location of the lost civilization.

The first person to make such a proposal was Ignatius Donnelly (1831-1901). Donnelly was a respected statesman, who served in the US Congress from 1863 to 1869 and wrote several works, including a treatise on 'Atlantis, the Antediluvian World.' In that work he stated:

"Deep sea soundings have been made by ships of different nations; the United States ship Dolphin, the German frigate Gazelle, and the British ships Hydra, Porcupine and Challenger have mapped out the bottom of the Atlantic, and the result is the revelation of a great elevation, reaching from a point on the coast of the British Islands southwardly to the coast of South America, at Cape Orange, thence southeastwardly to the coast of Africa and thence southwardly to Tristan d'Acunha. ... The submerged land ... rises about 9000 feet above the great Atlantic depths around it, and in the Azores, St. Paul's Rocks, Ascension, and Tristan d'Acunha it reaches the surface of the ocean." (3).

"Evidence that this elevation was once dry land is found in the fact that the 'inequalities, the mountains and valley's of its surface, could never have been produced in accordance with any laws for the deposition of sediment, nor by submarine elevation; but, on the contrary, must have been carved by agencies acting above the water level." (4) Donnelly concluded that the area was the probable location of the missing Atlantis.

The then British Prime Minister, William Gladstone, was so impressed with Donnelly's finding's that he sent a letter of appreciation on publication of the book, and even went so far as to request that the British Parliament approve the use of the Royal Navy to search the area for evidence of the lost civilization. Unfortunately for Donnelly, the fleet was engaged elsewhere at the time and so the search never took place. (Unfortunately for Shakespeare, Donnelly also became famous for discovering a cipher in the bard's work

suggesting that he had not written all that he was credited for, and that Francis Bacon was the true author of some of the texts.)

The Azores, themselves, are constantly subject to volcanic activity; pictures taken by the Space Shuttle and show volcanic smoke over Pico Island. Altogether there are five active volcanoes situated in the Azores area, and it may well be that such volcanic activity could account for the disappearance of an entire civilization just as it had in Crete.

Volcanic activity cannot just make living conditions untenable, but is also known to have a significant impact on the land and seascape. For example, in 1808 a volcano rose in San Jorge to a height of several thousand feet, and in 1811 a volcanic outpouring created a large island which was called Sambrina during its short above-water existence before it sank again beneath the sea. The Azore islands of Corvo and Flores have also constantly changed shape over the centuries, with large parts of Corvo presently under the sea (5).

More recently, on 14th November 1963, the skipper of a fishing boat off the south coast of Iceland radioed his base to report a large cloud of black smoke rising from the sea. He and his crew went on to watch as a huge explosion sent rocks hurtling into the sky, before a black land form emerged from the ocean depths. Within twenty-four hours the new island was higher than a house, and within a week its peak was 200ft above sea level.

Eruptions continued and, by 1967, the new island, named Surtsey (after the Norse fire god Surtur), had reached a height of 500 foot and was over a mile long. Today, colonized by birds and vascular plants, the island stands as proof that new land can emerge from the depths as quickly as an old one can sink into legend:- and there is evidence to suggest that some of the land now under water around the Azores was once above sea level, lending further support to the idea that these islands could have been the home of a lost civilization.

But for a civilization, there would not only have to be land but lost artifacts discovered on that land, and, again there is some evidence that such artifacts have been found. One such find was made by the crew of the SS Jesmond, a British merchant vessel of 1,495 tons that set off for New Orleans from Messina in Sicily at the end of the nineteenth century. In March 1882 the ship passed through the Straits of Gibraltar into the open sea. Some 200 miles west of Madeira, and a similar distance south of the Azores, the crew observed numerous dead fish and muddied waters. Later the same day smoke was observed, although it was assumed to be from another vessel. The following day, there were even thicker dead deposits of fish and the smoke was more visible, appearing to come from a land mass where charts and maps indicated there should be open waters.

The Captain of the Jesmond, David Robson, (Master's Certificate No 27911 in the Queen's Merchant Marine), cast anchor about 12 miles from the newly formed landmass, but far from sinking thousands of fathoms as the maps indicated, the anchor hit the sea floor after only seven fathoms.

Robson subsequently took a landing party ashore the new island to explore. When the ship ended its journey and docked in New Orleans and Robson gave an account of his findings to a reporter from the Times Picayune. He described how they had uncov-

ered crumbling remains of massive walls and recovered artifacts including "bronze swords, rings, mallets, carvings of heads and figures of birds and animals, and two vases or jars with fragments of bone, and one cranium almost entire ... [and] what appeared to be a mummy enclosed in a stone case... encrusted with volcanic deposit so as to be scarcely distinguished from the rock itself (6).

Robson advised the reporters who examined his finds that he intended to donate them to the British Museum, however at that point verification of these claims becomes difficult for the log of the SS Jesmond along with the offices of the ship's owners, 'Watts, Watts and Company' was destroyed during the London blitz of September 1940. The British Museum now has no record of any such donation from Robson (7).

Despite this lack of corroboration, there is other supporting evidence of Robson's discoveries. The unfortunately named Captain James Newdick of the steam ship Westbourne was sailing from Marseilles to New York during the same period when it reported sighting a large uncharted island in the area where Robson had landed. Other captains also reported floating fish which were eaten by the sailors, indicating that the fish's demise was sudden and not the result of some epidemic disaster (8).

History has also revealed that just as lands have emerged from the depths in that area, other land now under water was once above sea-level. One such piece of evidence was uncovered during the 1898 laying of a transatlantic cable. As during earlier attempts, the cable snapped and the workers were required to pull it to the surface for repairs. This incident occurred some 500 miles to the north of the Azores.

Whilst searching for the cable, the sea floor in the area was found to be composed of rough peaks, pinnacles and deep valleys, more reminiscent of land than the expected sea bottom. Grappling irons brought up rock specimens from a depth of 1700 fathoms. These rocks proved to be tachylyte – vitreous basaltic lava that cools above water under atmospheric pressure (9).

According to Pierre Termier, a French geologist who made a study of the incident, if the lava had solidified under water it would have been crystalline instead of vitreous (10).

Termier further surmised that the lava had been submerged under water soon after cooling, as evidenced by the relative sharpness of the material brought up. Although it cannot be ascertained exactly when this occurred, it was certainly within the last 15,000 years as lava decomposes in that time. Further evidence of more recent underwater activity comes from a discovery in 1923 when technicians from a Western Telegraph ship searching for a lost cable in the Atlantic detected that the rising ocean bed had thrown up the cable by 2.25 miles in only twenty-five years (11).

In 1949, Professor M. Ewing of Columbia University was exploring the mid-Atlantic ridge. At a depth of between two and three and a half miles, he discovered prehistoric beach sand. This puzzled Ewing, as sand, being the product of erosion, should be non-existent on the seabed. The conclusion reached was that either the land sank, or the ocean level was much lower in a past epoch (12).

There are other interesting finds. In the course of a submarine probe by the Geological Society of America in 1949, about a ton of limestone discs were lifted from the

bed of the Atlantic, just south of the Azores Island chain. Their average size was about 6 inches with a thickness of 1.5 inches. The discs had a peculiar cavity in their centre. On the outside they were relatively smooth, but, in the cavities, they were rough. These 'sea-biscuits' as they were called, did not appear to be a natural formation and could not be identified. According to the Lamont Geological Observatory (Columbia University) "the state of lithification of the limestone suggests that it may have been lithified under subaerial conditions and that the seamount may have been an island within the past 12,000 years." (13).

Other claims that the Azores may have been the location of a lost civilization were supported by alleged sightings in the area of underwater buildings and entire 'cities' made from aircraft as far back as 1942. These sightings first started when air ferry pilots flying from Brazil to Dakar glimpsed what appeared to be a submerged city on the western slope of mountains in the mid-Atlantic ridge.

However, despite all of this, there is no conclusive evidence that the Azores were ever home to a large technologically advanced civilization at any time in its past. There are, however, other possible locations for sightings of submerged architectural remains have been noted off Boa Vista Island in the Cape Verde Island chain. The Canaries have also been proposed as a possible location given that when the Spanish conquerors of those islands arrived they found remains of buildings and ancient cities, yet the Guanche's, who lived on them, were merely a stone age people who were no longer capable of constructing anything more than simple huts.

It would appear that the options for identifying a potential home for any lost civilization running out. Yet, as with the Azores, evidence of its remains could be hidden underwater.

That was certainly the vision of an American seer born into a small farming family in Kentucky, USA, in the last quarter of the nineteenth century. As a young boy, this seer, Edgar Cayce, would often tell his parents that he had been having strange visions, including talking to dead relatives. These events continued throughout his early years and later in his youth Edgar began entering self-induced trances. As a teenager he used these states to suggest cures for any ailments he may have been suffering from, and later he increased his activities to enter trance states to assist others who approached him for medical advice. By 1910, Edgar Cayce had become famous throughout America as a trance healer, psychic and Seer.

With a growing reputation, Cayce began individual 'life readings' for clients before making more prophetic visions affecting the whole of mankind. Such predictions included The Second World War, Californian earthquakes and the submersal of New York and Japan.

One of his more intriguing prophecies stated that Plato's legendary Atlantis would rise from the sea in 1968 or 1969 at a small Pacific atoll called Bimini. This prophecy led to great excitement and gave new impetus for the search for the legendary island.

The idea of Atlantis rising from the bottom of the ocean is not as ridiculous as it first sounds. As noted above, there is much evidence of land rising from the sea, however this has normally been associated with volcanic activity, which would surely destroy any

traces of civilization and Cayce was clear that Atlantis itself would arise, not its remains spewed out by an angry volcano. However, there is evidence that land can rise and fall without associated volcanic activity.

Falcon (or Jack-In-The-Box Island) had been discovered in the South Pacific in 1780 by the Spanish explorer, Maurelle. The Government of Tonga planted over 2000 coconut palms on the island in 1892, however within two years, the trees, along with the island itself, had disappeared beneath the ocean (14). A similar fate befell the fortress of Caravan-Sarai in the Caspian Sea that had been erected in 1135AD only to slowly disappear into the sea. The fortress's very existence turned into legend, however it rose again from the sea floor in 1723 and is still visible (15). Similarly, the Temple of Jupiter-Serapis in the Bay of Naples had been built in 105BC but sank into the Mediterranean only to rise again in 1742AD (16).

The concept of ancient remains rising from the seas was therefore supported by documentary record, so, on hearing Cayce's words, those fascinated by the Atlantis mystery turned their attentions to the Bimini area. And sure enough, in 1968 as predicted, an American pilot, Robert Brush, spotted what appeared to be a strange square shape on the seabed in the very area where Cayce had stated Atlantis would reemerge. This shape had never been observed before, and appeared to support Cayce's vision of Atlantis arising from the ocean floor. Brush managed to photograph this apparent underground structure from the air and later showed the picture to the French born oceanographer, Dimitri Rebikoff.

Rebikoff, who had gained some twenty years experience of underwater exploration in the Mediterranean and was President of the Institute of Underwater Technology, decided to organize an expedition to the site to investigate. He approached Dr J. Manson Valentine, a paleontologist, geologist, underwater archaeologist and former Yale University professor to assist in this expedition.

In 1968 Rebikoff and Valentine discovered that the dark rectangle on the seabed was an ancient building, possibly a temple, but now covered in sea plants. The building itself measured approximately 100 by 75 feet in size and is located near the north end of Andros Island, the largest island in the Bahamas (17).

Rebikoff was well aware that some natural formations can be mistaken for man-made structures, however he commented "nature can make circular shapes and a lot of other shapes, but nature cannot make a square angle – that is always the work of man." Rebikoff was hopeful his discovery might lead to further discovery stating, "the archaeological rule is this – when you find a temple-like structure, there is a city or town around it (18)." Early indications appeared to suggest that this was finally the sunken remains of the missing civilization.

Valentine and Rebikoff donned diving gear and examined the submerged building. They stated they could make out chambers or rooms in the ruins on the seabed and they also noted that the building faced due east to west, resembling the Uxmal Temple of the Turtles in Yukatan.

Determined to prove their archaeological rule, Valentine and Rebikoff extended their underwater quest for other signs for an Atlantis emerging from the sea floor. They were

not disappointed. Valentine takes up the story:

"The most exciting piece of evidence that on a grand scale [there] might indeed exist under the seas of our hemisphere [a lost city] came on the second day of September 1968, when the writer, diving in three fathoms off the north west coast of North Bimini, was amazed to discern an extensive pavement of rectangular and polygonal flat stones of varying size and thickness, obviously shaped and accurately aligned to form a convincing artifactual pattern.

"These stones had evidently lain submerged over a long span of time, for the edges of the biggest ones had been rounded off. Some were absolutely rectangular, sometimes approaching perfect squares. The larger pieces, at least 10 to 15 feet in length, often ran the width of parallel-sized avenues while the smaller ones formed mosaic like pavements covering broader sections. Where the sand had washed away between them, another deeper layer of stones appeared below." (19)

They named their discovery 'The Bimini Road' although it was not immediately obvious if it was a road, a sunken wall, foundation or even a dock. What was known was that it lay off the east coast of North Bimini and appeared to consist of blocks fitting together in a pattern, and according to researchers, supported by stone pillars placed underneath them.

Valentine and Rebikoff now had their underwater 'temple,' and road. What they needed were other ruins to complete their vision. They did not have to wait long, for their activities had generated growing interest in the area, and sure enough, further from Bimini, at a depth of about 100 feet, pilots of commercial and private planes began reporting sightings of vertical walls and even a great arch. This all gave further credence to the suggestions that the area may have been the remains of a city now lost under the sea.

D. G. Richards in an article in the Journal of Scientific Exploration gives an account of the investigations both amateur and professional of the Bimini waters. Richards concluded that there are indeed anomalies under the waters and he detailed three of these based on an aerial photograph taken at 6000 feet. Firstly he noted a 90-degree bend in the road which he considered was decidedly anomalous for a beach rock formation. Secondly he could identify a parallel row of stones and lastly a series of regularly spaced piles of stones which extended over 1.5 miles, cutting diagonally across ancient beach sites (20).

Richards also employed a satellite image of the area from which he observed other 'regular' features, such as a triangle, a pentagon, and a sharp, right angle corner with mile long sides. However on actually inspecting these regularities from a small boat, Richards found no obvious structures of any kind, instead, he noted that sea grass and white sand had caused the patterns. Despite this, he concluded that these superficial patterns might reflect the presence of artificial structures under the sediments.

Valentine, himself, commented of the rocks that made up these supposed structures, "many of [them] are flint-shaped micrite, unlike soft beach rock. The lines of closely fitted stones are straight, mutually parallel, and terminate in cornerstones. The stone avenue does not follow the curving beach rock-line that follows the shape of the island, but is straight. The long avenue contains enormous flat stones propped up at their cor-

ners by pillar stones like the dolmens off the coast of Western Europe. Perfect rectangles, right angles, and rectilinear configurations are unaccountable in a natural formation. One end of the complex swings into a beautifully curved corner before vanishing under the sand. No-one has yet dug underneath it, so we don't know how far down the stones go." (21)

Dating tests have been applied to the rocks that comprise the Bimini Road, and although stones themselves cannot be dated, the fossilized mangrove roots growing over the stones of the Bimini Road, have given a date of 10-12,000 years old. This fitted in well with Plato's assertion that Atlantis had disappeared beneath the ocean in 9600BC, over 11,500 years ago. Could the ruins at Bimini actually be the lost Atlantis as Valentine et al had proposed, with added support from the vision of a respected psychic?

There was certainly supporting evidence. A dive made by the French submarine 'Archimede' off the northern coast of Puerto Rico, revealed flights of steps cut in the steep sides of the continental shelf off Andros. Whilst it has never been established where the steps lead to, it is clear that they were not cut underwater.

Furthermore, a submarine expedition of the Frenchman Jacques Cousteau explored a huge grotto off the same island, with stalagmites and stalactites under 165 feet of water. As these features can only be formed in the air, the grotto must once have been a cave well above sea level. From submarine sediments on the walls of the grotto, it has been ascertained that the cave went down into the sea some 12,000 years ago (22).

All this was very interesting, but not very scientific. Consequently, carbonate sedimentologists and other geologists decided to visit the Bimini islands to establish whether the claims being made had any validity. Detailed studies have been undertaken since that time by Ball and Gifford (1980), Gifford (1973) Harrison (1971), Shinn (1978) and McKusick and Shinn (1978). Other studies have been undertaken by Davaud and Strasser (1984), Strasser and Davaud (1986) and Supko and others (1970).

With grants from National Geographic, Gifford (1973) and later Ball and Gifford (1980) undertook a detailed study of the Road beginning with the assumption that it was indeed an archaeological site. For the study, they surveyed the three linear strips of slabs that make up the Road; completed photomosaics of the features composed of a linear concentration of slabs; described the orientation and physical characteristics of the slabs; surveyed in the position of the strips of slabs in relation to benchmarks on North Bimini; obtained core samples from individual slabs within the road; prepared petrographic thin sections from the cores and other samples from individual slabs and dated samples from the slabs by radiocarbon and uranium-thorium methods.

Their 1980 observations were that there was no evidence that the Bimini Road was anything other than a natural formation (23). (See Appendix I)

Their laboratory analysis found that the slabs that comprised the three linear features consisted merely of bedrock of local origin. Firstly, the shells and other grains that compose the slabs were found to be identical to the grains in the lose sediment underlying the slabs. Secondly, the carbonate cements that form the bedrock are typical of cements found in modern beachrock cements. Finally, the radiocarbon dates obtained from the slabs of beachrock ranged in age from 300 to 1200 BCE for the shoreward line of

beachrock and a single date of about 4800 BCE for the seaward line of beachrock (24).

McKusick and Shinn (1980) obtained some oriented cores from one of the linear features. X-radiographs of seventeen oriented cores showed that the slope, particle size, dip direction, of the bedding is consistent from one block to another within two areas that they studied. If the blocks had been quarried from one site and then later laid out as a road, the original stratigraphy of the beachrock would not have been preserved. Clearly, these slabs represent beachrock that developed in situ along three shorelines. McKusick and Shinn also dated seven samples from the slabs and obtained dates ranging from about 750 to 1500 BCE The results of the scientific investigations onto the Road at Bimini conclude that the feature is not in fact man made, but beach rock that formed along the shore of North Bimini Island at three different shorelines during the Holocene era when the sea level was lower than present. Indeed, the lines themselves were not well founded or continuous enough to have served as any kind of road (25).

Despite this research, those wanting to find something mythical hung on, finally claiming that the formations must be man-made for they are unique. However, in fact, there are several places where rectangular slabs of bedrock are associated with carbonate beaches. These have been noted at Puerto Rico (26), Barbados (27) West shore of South Bimini (28) Joulter Cays, Bahamas (29) Heron Island, Australia (30) and Eastern Australia (31).

Greenland has also been suggested as the site of the lost continent. A north looking view of southwestern Greenland was taken on 14th November 1994 by the Space Shuttle Atlantis. The photograph shows numerous indentations, fjords, that were carved by the glaciers of the last ice age. Even today, the ice in the centre of Greenland is 11,000 feet thick, however, the geological records shows that once Greenland enjoyed a temperate climate; only not during a period when man walked on the surface of the Earth - effectively ruling the island out as a potential location of the lost race.

It appears that there is, in fact, no evidence for any large lost colony on Earth. Taking this to its logical conclusion, some have suggested that we are looking in the wrong place and rather than looking on the Earth, we should be looking inside the planet. Incredulous as it seems, such ideas did gain widespread support and will be mentioned here out of curiosity.

There is certainly some evidence of subterranean activity. Peter Kolosimo in 'Timeless Earth' writes of a tunnel system connecting Lima to Cuzco and from there on to the Bolivian border. "Apart from the lure of gain, these tunnels present a fascinating archeological problem. Scholars agree that they were not constructed by the Incas themselves, who had used them but were ignorant of their origins. They are in fact so imposing that it does not seem absurd to conjecture, as some scientists have done, that they are the handiwork of an unknown race..." (32)

Harold T. Wilkins, in his book 'Mysteries of Ancient South America' gives more details of this tunnel system. "One of the approaches to the great tunnels lay, and still lies, near old Cuzco, 'but it is masked beyond discovery'. This hidden approach leads directly into an immense 'subterranean', which runs from Cuzco to Lima, as the crow flies, a distance of 380 miles! Then turning southwards, the great tunnel extends into what, until about 1868, was modern Bolivia, around 900 miles! ..." (33)

Wilkins also advises of tunnels in the West Indies. "Similar strange tunnels of incredibly ancient date, and unknown origin, in the West Indies, were brought to the attention of Christopher Columbus when he visited Martinique." (34)

There is also apparently a huge complex of underground passages and halls beneath the South American continent at Ecuador. An Argentinian, Juan Moricz, claimed to be the legal owner of this strange underground world, however, convinced of the incalculable cultural value of his find, he asked the State of Ecuador to take control and set up a scientific commission to study the area (35). Erich Von Daniken describes this vast system of caves in his book 'The Gold of the Gods' and he details how Moricz guided him through the network, however Moricz claims this never happened. Indeed a report in the German Magazine Der Spiegel of March 1973 contains as admission from Von Daniken that he made this up (36).

However, the tunnels themselves are real, and similar underground passageways have also been found in Europe. Malcolm W. Browne in his article 'Underground Tunnels Threaten Town In Hungary's Wine Country' refers to over sixty miles of ancient tunnel systems of unknown origin and purpose which have been discovered beneath the town of Eger, Hungary, some of which have collapsed (37).

Amazing Stories magazine of October 1947 contained the following letter: "Sirs ... I don't know whether you are familiar with the Big Bend or not, but there is no more wild or desolate area in the country. Rugged mountains, cut by canyons, there are innumerable parts of it which have never known the foot of man.

... Finlay [a friend of the letter's author] spotted a mountain lion ... they managed to keep him in sight ... the lion, however, started up a faint trail up one side of the canyon to a small cave they could see about a hundred feet from the floor of the canyon. They followed him up this trail, but when they got to the cave – there was no lion! ... In the rear [of the cave] was a perfectly round hole ... they approached the hole and peered down into it. It was perfectly round – also it was about four or five feet in diameter. They couldn't see very far down it, but it appeared to descend rather sharply and at a steady gradient. The fellows gathered some dry grass from the canyon floor and made some torches. The incline of the bore was too steep for them to climb down so they tossed the torches down it. They just slid down further and further and disappeared into the gloom. They never did see or hear of the lion again.

"At first they thought they had stumbled into some old Spanish mine workings. But there was no sign anywhere of a dump that always goes with a mine. By all rights there should have been some sign of the earth and rock that had come out of that hole – but there wasn't.

"When they inspected the hole itself more closely, they were amazed at its symmetry and at the consistency of the section of the bore as far as they could see down into it. The fact that the bore was perfectly round puzzled them, too. If it was a mine shaft, it most certainly wouldn't have been round, but instead would have been flat on the bottom. The fact that the shaft extended straight and unwavering as a rigid pipe was cause for further amazement. Since the fellows had no rope with them, which would have been needed to descend the shaft, as well as lights, they scratched their heads awhile and then left.

"Finlay wanted to go back with equipment ... but ranchers are busy people and he never went back." (38)

A major advocate that the Earth is hollow, thus that these tunnels led to an 'inner world,' was Cyrus Teed.

Teed came to this conclusion shortly after the American civil war when he claimed to have had a vision, "the earth is a hollow sphere, and we live inside it. Everything in the universe is in here with us – planets, comets, stars – everything. What's outside the sphere? Nothing." (39)

Teed explored this idea in a book entitled 'The Cellular Cosmogony, or, the Earth a Conclave Sphere' which he wrote under the pseudonym 'Koresh'. According to Teed, the known world is on the concave, inner surface of a sphere, outside of which there is only a void. At the centre of the sphere, the rotating sun, half dark and half light, gives an illusion of rising and setting. The Moon is a reflection of the Earth's surface; the stars and planets reflect from metallic planes on the Earth's concave surface. The vast internal cavity is filled with a dense atmosphere that makes it impossible to see across the globe to the lands and peoples on the other side (40).

Teed also argued that there is no such thing as gravity; our feet are kept on the ground by centrifugal force. As bizarre as it sounds, Teed's proposal could not be refuted mathematically. Indeed he offered a \$10,000 reward to anyone who could prove him wrong, but found no-one able to do so. (The trick is done by inversion, a mathematical transformation that lets a mathematician turn a shape inside out.)

Clearly, Teed's theories were hopelessly wrong. However the concept of a hollow earth continued to attract a following, with a 'photograph' taken by the ESSA-7 satellite on 23rd November 1968 giving new impetus to the idea. This 'photograph' billed, as 'the most remarkable photograph ever taken' (41) was considered by the hollow earth theorists to be incontrovertible proof that the Earth is indeed hollow apparently showing a massive 'hole as the pole.'

However, the picture was not all it appeared, for the 'photograph' was actually a mosaic of television images taken during a twenty-four hour period at differing points along the satellite's orbit. The images were later processed by computer and reassembled to form a composite view of Earth as if seen from a single point directly over the North Pole. During this time the regions near the Pole were shrouded by the continuous darkness of the arctic winter, thus the unlighted area around the pole.

Yet the hollow Earth believers, and, yes, they still do exist, continue to present evidence which, in their view, supports the theory. Two photographs show a depressed area near the pole that is allegedly the opening to the hollow world.

Given that there is no obvious location for the missing civilization – either on the Earth or in it – some researchers have suggested that all evidence has been wiped out by a natural disaster than befell the world in prehistory. Indeed the great flood of the Bible is even cited as one of the consequences of this disaster and a find in the frozen wastelands of Siberia at the turn of the Twentieth Century provides tantalizing clues as to what may have happened.

APPENDIX I

1. The three features are unconnected at the southwest end; scattered blocks are present there but do not form a well-defined linear feature connecting the seaward, middle and shoreward features.

No evidence exists anywhere over the three features of two courses of blocks, or even a single block set squarely atop another.

Not enough blocks lie in the vicinity of the three features to have formed a now-destroyed second course of blocks.

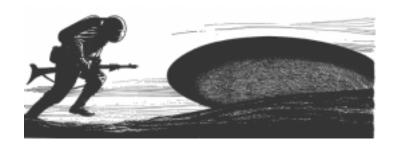
Bedrock closely underlies the entire area of the three features eliminating the possibility of excavations or channels between them.

Indications are that the blocks of the inner and middle features have always rested on a layer of loose sand. No evidence was found of the blocks being cut into or founded on the underlying bedrock surface.

In areas of the seaward feature where blocks rest directly on the bedrock surface, no evidence was found of regular or symmetrical supports beneath any of the rocks.

We saw no evidence on any of the blocks of regular or repeated patterns of grooves or depressions that might be interpreted as tool marks.

The inner and middle features are continuous only over a distance of about 50 meters. Though the seaward feature extends several hundred meters further to the north east, it too is not well founded or continuous enough to have served as some kind of thoroughfare. In fact, the only attributes of the three linear features that suggest a human origin are the regular shapes of some of the blocks. These are also attributes of natural bedrock deposits. (11)



THE LOST WORLD DISCOVERED?

The world as known to our ancient ancestors was made up of the Americas, Europe, Africa and Asia and then made complete with the 'discovery' by the west of Australasia. Yet the planet had a hidden continent, one that was only 'revealed' as recently as 1820. Indeed some maps before that time show no record of the continent even existing, merely leaving a space where the frozen landmass should have appeared.

According to legend, the Maori made the first sighting of the icebound southern ocean. However the first confirmed crossing of the Antarctic circle is credited to the British Captain, James Cook (1728-1779) in 1773 and it was to be a further forty-seven years before modern man first set eyes on mainland Antarctica during the Russian, British and United States expeditions of 1820.

These explorers 'discovered' a land that was bigger in area than either Europe or the United States and Mexico combined, but an inhospitable land, with an ice cap measuring 13,000ft thick in places and covering 96% of the continent's surface. It was to be a further seventy-five years before the first confirmed landing on Antarctic mainland on 24th January 1895, a landing that led to an argument over who was first ashore. Borchgrevink depicts himself as making the first landing, much to the apparent dismay of others in the boat.

Such bleak conditions, together with months of darkness make for a land where it is impossible for land mammals to survive, although whales and seals populate the surrounding seas, feeding off the masses of 'krill' there. Porpoises and dolphins are also attracted to the icy waters by the abundance of fish in the area, predominately Antarctic perches. This complete absence of predatory land mammals on Antarctica has proved to be a great attraction for birds, with Emperor penguins, Antarctic petrels and South Polar skuas breeding there and nowhere else.

Contrary to popular perception, snowfall is rare on the continent except at the coast, however blizzards are frequent, as loose snow is whipped up by winds at the margins of the ice cap. In all, these hostile conditions make for a barren, frozen wasteland where 'cold nightless summers, fade into colder sunless winters' (1).

Yet, as noted in the first chapter, it has been claimed that some people in our prehistory not only knew of this land but had even apparently mapped it before it became embedded in ice. These claims dominate many current 'alternative history' books such as Graham Hancock's, Fingerprints of the Gods, Colin Wilson's, From Atlantis to the Sphinx and Rand and Rose Flem-Ath's, When the Sky Fell, amongst others. These authors draw

the conclusion that Antarctica could possibly be the location of the lost people and/or the location of the lost Atlantis.

Clearly, Antarctica as it appears today could not support any civilization; the cold and barren conditions would soon destroy any colony. Yet the popular conception of Antarctica as a continent that has been buried deep in ice for an eternity is flawed.

Whilst certainly true that parts of Antarctica have been buried under ice for millennia, there is much evidence to suggest that before the Pleistocene era (c. 8,000-2m yrs BC), parts of the continent were once warm and ice free (2).

There is certainly evidence in the early years of this planet, during the Cambrian era, (480m – 590m years ago) of "a moderately warm sea stretching nearly or right across Antarctica, in the form of thick limestones very rich in reef building Archaeocyathide" (3) and the Ohio Range Mountains in Antarctica contain rocks rich in fossils from 390 million years ago.

Fossil bones of a land reptile, Lystrosaurus, which lived in Antarctica about 200 million years ago, have been found in sandstones that were deposited by ancient rivers (4) and fossilized remains of ancient ferns such as Dicroidium from the same period have also been discovered.

In March 1968 the National Science Foundation of the United States announced the discovery of a jawbone of a long extinct amphibian found in the mountainous central Antarctic region around 525km from the South Pole. This bone was part of the skeleton of a Labyrinthodont, a creature that lived in the river valleys of Gondwana and in the rift valley between Australia and Antarctica until it died out some 110 million years ago. This discovery was made by an expedition organized by Ohio University and led by geologist Peter J. Barrett who noted "it is clear that an amphibian of this type could only have survived in a hot climate, or at least a warm one and that therefore the Antarctic must once have been absolutely free of ice." (7)

Dr Umbgrove, in his book 'The Pulse of the Earth', notes that the flora of Antarctica, England, North America and India had many plants in common during the Jurassic period (130m-180m years ago) (5) and there is also evidence that during this Jurassic period dinosaurs roamed the now ice-gripped continent.

This was discovered during an expedition to the Antarctic undertaken in 1990-1991 by Augustana Professor Dr. William R. Hammer and an accompanying field team. The team came across bones in the ice and on digging further, excavated Antarctica's first known dinosaur on Mt. Kirkpatrick, at an elevation of approximately 14,000 feet not far from the South Pole.

The bones indicated that they had discovered a crested therapod that the team named Cryolophosaurus ellioti, ('frozen crested reptile'). To date it is the only therapod to be found in Antarctica, although clearly there will be others of its kind buried under the ice cap. In addition to the dinosaur bones, the team also found bones from other creatures at the same site. These included a 'pterosaur' (flying reptile), a tritylodont, and most significantly, a plateosaurid prosauropod. (Significant as the animal's foot structure and size is nearly identical to two plateosaurid prosauropods found in Germany and China.) (6)

The evidence of a much warmer Antarctica in past times is supplemented by the

British explorer, Sir Ernest Shackleton (1874-1922) who found coal beds within 200 miles of the South Pole (8), that could only have formed in the presence of extensive vegetation and, during the Byrd expedition of 1935, geologists discovered fossils on the sides of Mount Weaver, in latitude 86°, 58 minutes south, about the same distance from the pole and two miles above sea level.

These included leaf and stem impressions and fossilized wood. (9).

British geologists also discovered evidence of great fossil forests in Antarctica of the same type that grew on the pacific coast of the United States 20m years ago (10) and it would have been this ancient vegetation, later covered by warm seas and thick marine sediment, that produced the extensive coal seams that run through the Transantarctic Mountains (11). Admiral Byrd, one of Antarctica's most accomplished explorers, commented in 1949 that this coal seam was 'enough for the needs of the entire world' (12). Actually he was wrong, for the coal was of a poor quality, however, the thought itself was generous.

Other evidence of ancient landscapes and seaways near the South Pole has recently been found on these high peaks. Tree stems, roots, pollen, and tiny fossils of open water marine life, have been identified by Ohio State geologists Peter-Noel Webb, David M. Harwood and John H. Mercer as being 2-4 million years old from the Pliocene era. (13)

In 1952, Dr Lyman H Dougherty of the Carnegie Institution of Washington, completing a study of these fossils, identified two species of a tree fern called 'glossopteris', once common in the southern continents of Africa, South America and Australia. He also found a giant tree fern of another species and identified a fossil footprint as that of a mammal-like reptile. Henry suggests that this may mean that Antarctica, during its period of intensive vegetation, played host to many different life forms. (14) Soviet Scientists have reported finding evidence of a tropical flora in Graham Land, another part of Antarctica, dating from the early Tertiary period. (15)

Shrub wood grew on the banks and shores of alpine streams and lakes during several interglacial periods, the researchers suggest. In relatively warm times, great open seaways may have reached deep into the Antarctic interior, and the great central ice caps may have retreated to much smaller ice caps and high alpine glaciers. (16)

Admiral Byrd, later of Operation High Jump fame, discovered the Edsel Ford Mountains in 1929. These mountains are of non-volcanic, folded, sedimentary rock, with the layers adding up to 15,000 feet in thickness. Thomas Henry, in his 1950 book 'The White Continent' suggests that they indicate long periods of temperate climate in Antarctica. "The greater part of the erosion probably took place when Antarctica was essentially free of ice, since the structure of the rocks indicates strongly that the original sediment from which they were formed was carried by water. Such accumulation calls for an immensely long period of tepid peace in the life of the rampaging planet." (17)

The evidence is plentiful, therefore, that the popular vision of a permanently frozen Antarctica is flawed and indeed, at some point in its past, the continent was sufficiently ice-free for it, or at least parts of it, to have been mapped. The question however is, was it ice-free at a time when mankind could have mapped it? If the Piri Reis map is accurate, then the answer must surely be yes.

This map, as discussed previously in 'Weird History' has strong credentials, however, there are clearly serious flaws in it suggesting that it should be treated with caution when cited as evidence of the existence of an early and lost civilization.

One such flaw is that of the island shown at 0° latitude and just east of longitude 47° W on the parchment. Hapgood refers to this island as "one of the major mysteries of the Piri Reis map" (18). He continues, "the details of the island are convincing. Some reproductions of the colored facsimile (but unfortunately not all of them) suggest by a deeper shade around the coasts that there were coastal highlands or mountains surrounding a great central plain. The harbours and islands off the coast are inviting. They are carefully drawn. There seems to have been an effort to achieve accuracy (19)." Hapgood notes that the island has now disappeared into the ocean, "submerged to a depth of a mile and a half." (20)

Hapgood was convinced that if he could only prove that this island had existed, then this would silence any doubters once and for all; for it was the degree of detail in the Piri Reis map that so convinced him of its accuracy (once realigned to modern scales). He therefore decided to approach the US Government for help and permission to search for underwater cities in the region of the St Peter and St Paul Rocks. By October 1963 Hapgood had presented a convincing enough argument to secure an interview with President Kennedy to discuss the matter further. However, as history records, fate intervened.

In actual fact, even if the interview had gone ahead, it would not have changed the fact that the island shown on the map is not presently submerged beneath the Atlantic nor did it ever exist.

We know this now because the US Navy has recently released satellite data gathered by the US Navy's Geostat spacecraft between the 31st March and 30th October 1986 that was used to prepare the first detailed topographic map of the entire ocean floor (21).

The Piri Reis 'missing' island should therefore have appeared on this map of the seabed, however the Geostat map shows no evidence of any such island nor any submerged mountains. Indeed the only topographic forms that can be seen in the area where the island 'should be' are numerous transform faults, ridges and trough topography that characterises normal oceanic crust.

If Piri Reis could 'invent' an entire island of considerable dimensions, then surely he could also make up the supposed outline of Antarctica?

Obviously the answer is yes, however, it should be remembered that Piri Reis readily admitted that he had merely complied his world map from twenty or more smaller maps, and these in turn were probably compiled from even smaller and older maps. Consequently, some areas of the overall map will be accurate whilst others inaccurate and without doubt the original source maps would have been the most accurate of all for these are the maps that would have actually been used by those who drew them. In essence, just because part of the map is erroneous, does not make it all so. Indeed, the map itself was a working tool used by mariners and others. It would hardly have enjoyed this status had it been so riddled with errors that it would have been safer to voyage blind.

Yet it is the outline of the Antarctic area we are interested, rather than that of South America, Africa or Spain. Clearly if there were other ancient maps of the area then this would lend credence to the idea that it really had been mapped before becoming entombed in ice. Hapgood himself realized this and searched for further supporting evidence. His search was to lead him to the Reference Room of the Library of Congress, Washington DC, America. Hapgood recalls:

"I found ... many fascinating things I had not expected to find, and a number of charts showing the southern continent. Then one day, I turned a page and sat transfixed. As my eyes fell upon the Southern Hemisphere of a world map drawn by Oronteus Fineaus in 1531, I had the instant conviction that I had found here a truly authentic map of the real Antarctica.

"The general shape of the continent was startlingly like the outline of the continent on our modern maps. The position of the South Pole, nearly in the center of the continent, seemed about right. The mountain ranges that skirted the coasts suggested the numerous ranges that have been discovered in Antarctica in recent years. It was obvious, too, that this was no slapdash creation of somebody's imagination. The mountain ranges were individualized, some definitely coastal and some not. From most of them rivers were shown flowing into the sea, following in every case what looked like very natural and very convincing drainage patterns.

This suggested, of course, that the coasts might have been ice-free when the original map was drawn. The deep interior, however, was free entirely of rivers and mountains, suggesting that the ice may have been present there." (22)

The fact that this map shows the complete continent of Antarctica seems remarkable in itself, suggesting that far from mankind having made superficial contact with part of the continent, she or he was familiar with the entire area at least three hundred years before Antarctica was supposedly discovered.

Hapgood asked the Cartographic Section of the 8th Reconnaissance Technical Squadron, Massachusetts to evaluate both the Piri Reis and Oronteus Fineaus maps. In reply, he received the following letter from Captain Lorenzo W Burroughs, the chief of the section, who gave a summary of their findings:

"A) The solution of the portolano projection used by Admiral Piri Reis, developed by your class in Anthropology, must be very nearly accurate; for when known geographical locations are checked in relationship to the grid computed by Mr. Richard W. Strachan (MIT) there is remarkably close agreement. Piri Reis' use of the portolano projection (centered on Seyene, Egypt) was an excellent choice, for it is a developable surface that would permit the relative size and shape of the earth (at that latitude) to be retained. It is our opinion that those who compiled the original map had an excellent knowledge of the continents covered by this map.

As stated by Colonel Harold Z. Ohlmeyer in his letter (July 6, 1960) to you, the Princess Martha Coast of Queen Maud land, Antarctica appears to be truly represented on the southern sector of the Piri Reis Map. The agreement of the Piri Reis map with the seismic profile of this area made by the Norwegian-British-Swedish Expedition of 1949, supported by your solution of the grid, places beyond a reasonable doubt the conclu-

sion that the original source maps must have been made before the present Antarctic ice cap covered the Queen Maud Land coasts.

It is our opinion that the accuracy of the cartographic features shown in the Oronteus Fineaus (sic) Map (1531) suggests, beyond reasonable doubt, that it was also compiled from accurate source maps of Antarctica, but in this case the entire continent. Close examination has proved the original source maps must have been compiled at a time when the landmass and inland waterways of the continent were relatively free of ice. The Cordiform Projection used by Oronteus Fineaus (sic) suggests the use of advanced mathematics. Further, the shape given to the Antarctic continent suggests the probability that the original source maps were compiled on a stereographic or gnomonic type of projection (involving the use of Spherical trigonometry.)

We are convinced that the findings made by you and your associates are valid, and that they raise extremely important questions affecting geology and ancient history, questions which certainly require further investigation." (23)

In order to explain these ice-free coastlines, Hapgood concluded that Antarctica must have been located a few thousand miles further north than its present location, and slipped to its current position in an 'Earth Crust Displacement'.

The idea behind Earth Crust Displacement is that ice builds up at the poles, and, on reaching a critical point, the outer crust of the planet slips under the weight of the ice, casting previously temperate areas into the polar positions. (This initially sounds impossible, however movement of the Earth's plates is now accepted, for example India drifting and crashing into Asia causing the rise of the Himalayas.)

It was this conclusion that led writers such as Graham Hancock, Rand and Rose Flem-Ath et al, to claim that Antarctica may, in fact, have been the location of the legendary Atlantis. Such a concept was certainly compatible with Plato's story; and would account for the destruction of the civilization as described by the author.

The continent was certainly big enough to be home for an entire civilization, and its location further north in the Atlantic would have made its position ideal as a central link between the 'old' and 'new' worlds, accounting for some of the connections discussed in this work.

However, the concept of Earth Crust Displacement is built upon a misunderstanding of plate tectonics. The crust of the Earth is not floating on a liquid nor even a semiliquid mantle. In fact, the crust is securely adhered to the mantle and connected by the asthenosphere, a layer more viscous than lava and certainly not fluid enough to allow for rapid movement.

In fairness to Hapgood, many of the studies that reached these conclusions were made after his theory was proposed, however more recent authors have been careless in continuing to propose this theory even after it has been unequivocally disproved. As noted earlier, Albert Einstein supported Hapgood's theory, however the conclusions he reached, like Hapgood's, were only as good as the data then available. Many years on, we now know the data to be obsolete.

The Crust Displacement theory also ignores some inherent evidence. If Antarctica had originally been located thousands of miles further north, or at least not covered in

ice – it would reveal itself in its true form; split into East and West Antarctica, with a sea in-between its constituent parts. For Antarctica is only one huge continent when covered in ice and it has not been that free of ice for at least four million years.

It is inconceivable that the continent could have been situated away from the pole, but still under solid ice at its centre as the Oronteus Fineaus map inevitably suggests.

The only other way Antarctica could have been the home for a civilization is if it has been ice free in recent times – at least within the last twenty thousand years. Yet, the available evidence confirms that this is not the case.

Drilling was undertaken in 1967-8 at Byrd Station where a core drill went down 7,101 feet before it hit liquid water near the bedrock, then froze fast (24). In 1970 Soviet scientists began drilling at Vostock Station, high in the inland ice cap in east Antarctica. In 1981-2 French scientists reached more than 900m beneath a point called Dome C, near the centre of the huge ice cap. And since 1980 the Vostock ice drillers have bored through more than 2080m of the 3700m (12,140ft) of the ice under the station (25). "The Vostock core is the first to cover, completely and unambiguously, the entire last 150,000 years of the earth's ice-age cycle."

French Glaciologist, Claude Lorius, reported in 1985 after working with Soviet scientists on the ice-core (26). "It clearly goes back through earth's previous interglacial warm period, called the Eem or Sangamon, and well into the ice-age before that." Lorius continues, "That previous interglacial was similar but markedly warmer than our present warm spell, the Holocene. The beginning of the previous warming was as sharp and extensive as was the opening of the Holocene, between about 10,000 and 8000 years ago." (27)

A discovery made in 1996 also confirms that a least part of Antarctica has been under ice for millions of years. Space and ground based instruments identified a huge lake more than two miles below the continent, insulated by millions of years of ice that may still be a home to creatures that inhabited the planet more than 30 million years ago. Researchers know that there should be life in this underworld lake for Russian and American microbiologists have already examined microbes in samples of ice laid down a mere 400,000 years ago.

"We've found some really bizarre things – things that we have never seen before," noted Richard Hoover of NASA.

He and his Russian colleague have given the microscopic creatures temporary nicknames such as Klingon, Mickey Mouse, Porpoise and Sphere (28).

The discovery at such depths raises the hope that other stranger life forms will be found in the lake, particularly as volcanic heat deep in the rock may provide energy to sustain such forms of life. Antarctica is 58 times as big as Britain and there could be hundreds of lakes below the ice-sheet. "Every single one of them could be potentially of significance," said Dr Ellis-Evans of the British Antarctic Survey. "This is a whole new world opening up for us." (29)

It would appear that the maps are neither going to confirm Antarctica as the home of the missing civilization, nor as evidence of such a civilization. Indeed a closer scrutiny of the Oronteus Fineaus map in particular, reveals that it may be little more than a romantic

pictorial of a southern continent. This map certainly does not resemble the subglacial bedrock topography of Antarctica, for example, Wilkes Land, which the Oronteus Fineaus map shows as solid land is occupied almost entirely by two large subsea basins and an archipelago of bedrock islands. (30) In a partially glaciated Antarctica this solid land shown on the map would also be under water.

The map also fails to show the Amery basin, which in either a partially or completely deglaciated Antarctica would be occupied by a 430 to 500 mile long bay lying perpendicular to the coast of Antarctica between Princess Elizabeth land and Mac Robertson land. (31)

The map has other faults. Because the bedrock surface underlying West Antarctica lies hundreds of meters below sea level, except for some bedrock islands, the coastline shown on the Oronteus Fineaus map would have had to have been to the edge of an ice sheet. Yet as noted above, Hapgood, claims the map shows rivers' mouths, fjords and other non-glaciated features on this glacial coastline. In essence, the map does not show an Antarctica free of ice, nor does it depict an accurate icebound Antarctica. Despite this, the map does exist and sufficiently resembles the continent to confirm that its makers had some knowledge of, or belief in, a southern continent.

However irrefutable proof of such a southern continent being mapped in prehistory could only be confirmed if an ancient map could be produced that accurately showed Antarctica in its separate landforms. It has been claimed that such a map does exist. It is called the 'Bauche Map' and was drawn in 1737 by Phillipe Bauche, an eighteenth-century French geographer. It has also been suggested that Bauche's source maps were older than those of Piri Reis or Oronteus Fineaus given that he appears to show Antarctica as it would have looked millions of years ago, in a partially glaciated state.

However, despite showing Antarctica as two landmasses, the map appears to have little else in common with the continent as we now know it to be. Critics argue that except for showing that there is a landmass there and a sea did flow through the middle, the map is of no academic value. Academically they are quite right, but how on Earth could an 18th Century cartographer possibly know that millions of years ago the hidden continent had an inland sea-way running through its middle? The answer is simple, he could not, for the technology that revealed this has only been developed this century and man simply did not exist in any intellectual form when this knowledge was last known. And yet it appears that Bauche did know. Perhaps, however, there is another solution that fits the facts of these maps a little more comfortably and credibly.

History records that as early as the 6th Century BCE, Pythagoras was proposing that the Earth was round, and other academics, Parmenides (450BCE), Aristotle and Eratosthenes (276-194 BCE) agreed (32). By 150 CE the Egyptian geographer, Ptolemy, had concluded that the world was symmetrical and must therefore have a southern continent – Terra Australis Incognita, however he also believed that this southern continent was cut off from the known world by a 'Torrid Zone' of fire and fearful monsters (33). The concept then, of an undiscovered southern continent, has been held for over two millennia.

Ptolemy's teachings, however, became lost in the Middle Ages, but were preserved by the Arabs. They reappeared in Europe from the 10th Century onwards as the Moors

invaded Spain. Then in 1410, Ptolemy's works were translated into Latin and French and became accessible to a wider audience, stimulating curiosity to discover the unknown continent.

Later that century the fear of the Torrid Zone was finally overcome as Bartholomew Diaz reached the Cape of Good Hope in 1488 and was followed a decade later by Vasco de Gamma who went round it to reach India. The significance of these voyages being that it became known that Africa was merely an extension of the known world, the Torrid Zone was fictitious and the southern continent, if it existed, lay elsewhere and further south and was accessible. Then, in 1501 a Florentine seaman, Amerigo Vespucci, set off to explore the South American coastline. Exactly what areas Vespucci explored are unknown, but it appears that he charted the area, for when Magellan journeyed there in September 1519 he seemed to have knowledge of the coastline, noting: "This strait was a circular place surrounded by mountains, and to most of those in the ships it seemed that there was no way out from it to enter the said Pacific Sea. But the captain-general said that there was another strait which led out, saying that he knew it well and had seen it in a marine chart of the King of Portugal, which a great pilot and sailor named Martin of Bohemia had made (34)." Magellan also reported seeing land to the south, land that became known as Tierra del Fuego.

From information taken from Magellan's voyage, a map was later constructed in Antwerp in 1570. The map showed Terra Australis as extending south from Tierra del Fuego off the tip of South America. (It was not until 1577 when Drake charted the area that this mistake was rectified.)

The important point to note here is that early maps simply placed the southern continent, which had been 'known' about for centuries, somewhere outside known and charted areas. As a result of this, earlier maps appear to be more confident about the southern continent than slightly later maps which were based on actual data rather than accepted concepts. For example one 1620 Dutch map starts to show the outline of the southern coast of Australia and some tentative lines around Antarctica, from reports from ships that strayed south.

Now as far as the Piri Reis map is concerned it appears much more likely that its sources lay in slightly earlier cartography undertaken by peers such as Vespucci who had been in the area a mere 13 years previously than some 'lost civilization' who supposedly lived there – without trace – thousands of years before any civilization is known to have existed and in conditions that would have made living there an impossibility at that time.

It also appears suspicious that both the Piri Reis map and the map from Magellan's voyage both crush 'Antarctica' against Southern America, suggesting they are contemporaneous in origin rather than divided by thousands of years.

As far as the Oronteus Fineaus, Bauche and other ancient maps are concerned, they all date from no earlier than the beginning of the 16th Century – a time when we know voyages were taking place in the area and maps were tentatively being drawn, even if they were inaccurate.

Given that we also know that Antarctica had been in subzero temperatures for thou-

sands of years, has had no plant life for millions of years, is bathed in darkness most of the year round and the so called ancient map 'evidence' of life there does not stand up to any real scrutiny, it is not hard to conclude that Antarctica was not the location of the lost people.

So how can the discovery of ferns, dinosaurs and other mammal life on a once warm Antarctica be explained? Here, at least Hapgood et al were treading on safer ground, for whilst Earth Crust Displacement may have been proved to be a fallacy, the theory of Continental Drift has is origins firmly rooted in science and fact.

This theory suggests that the Earth's crust is split into a number of 'plates' that support the continents. These plates are moved around the ocean spreading (the addition of new crustal rock along mid-oceanic ridges) and by convection currents in the rocks of the Earth's mantle, beneath the crust. This theory helps explain how fold and block mountains, volcanoes and earthquakes occur.

Antarctica then, was not always hiding in the sunless frozen wastelands of the planet, but many millions ago was located further north where it enjoyed a more temperate climate. When the Lystrosaurus roamed the continent, the Earth's land masses were much closer together, and by the time the Cryolophosaurus ellioti was making its mark on the planet, Antarctica had broken away to form its own continent.

Over millions of years the continents continued to drift away from each other, with India ploughing across the oceans to later collide with Asia and force up the Himalayan Mountains. Slowly the continent drifted into what is now called the Antarctic Circle, making conditions impossible for land mammals to survive.

So with Antarctica ruled out, it appears that the search for the location of any lost peoples has been exhausted. Yet despite this, there remain those intriguing puzzles that simply cannot be explained by conventional history. If no one on Earth can account for them, then perhaps we should be looking elsewhere.

TOWARDS THE SKY

In a remote, rocky, desolate and acrid region of Western Africa, a tribe called the Dogon scratch out a way of life that has changed little over the centuries. With traditions firmly rooted in agriculture, western technology has no place in their lives, although their philosophy and religion is both rich and complex.

The exact origin of the Dogon tribe is lost in history, however they are known to have settled in the Bandiagara Plateau, at the Southern edge of the Sahara desert (where they remain today) some time between the 13th and 16th centuries. They are originally believed to have been of Egyptian descent.

Today the tribe has a population of 600,000; 138,000 of whom live in Burkina Faso, with the majority of 462,000 living in Mali itself.

The Dogon way of life is steeped in astronomical tradition based on a knowledge kept by the tribe's priests that dates back to 3200 BCE. It is this knowledge that makes the tribe so remarkable, for they appear to know facts not supposedly known to man until the twentieth century.

The Dogon have long held that the star Sirius, some 8.7 light years away, has a companion star which is invisible to the human eye. They state that this companion star, which

rotates on its axis, has a 50-year elliptical orbit around the visible Sirius and is extremely heavy. They also have knowledge of the rings of Saturn, Jupiter's satellites and other detailed astronomical data some of which, it has to be acknowledged, is inaccurate.

This knowledge was first recorded by two French anthropologists, Marcel Griaule and Germain Dieterlen following discussions with four Dogon priests in the 1930s. Perhaps none of this seems remarkable, however Sirius B was only seen for the first time by telescope in 1970 when photographed by Irving Lindenblad of the US Naval Observatory. Yet the Dogon had apparently known about this second star for millennia.

The renowned astronomer, Carl Sagan concluded that the Dogon could not have acquired their knowledge without contact with an advanced technological civilization. He suggested, however, that the civilization was terrestrial rather than extraterrestrial in origin (1).

Sagan believed that the Dogon gained their knowledge from western travellers who visited the tribes during the 1920 and 1930s. His view is that these travellers would have discussed astronomy with the Dogon priests who would then have weaved this new information into older traditions, which in turn, mislead the anthropologists. However, this is purely conjecture, accurate though it may be.

It is true, however, that there have been French schools in that area teaching geography and natural history in their curriculum since 1907 (the Republic of Mali was formerly known as French Sudan). It has also been noted that there has been a nearby Muslim University at Timbuktu since the 16th century and evidence that some members of the Dogon fought side by side with the French during the First World War (2). Could these have been the sources of the Dogon knowledge?

Robert Temple, author of 'The Sirius Mystery' thinks not. "The two French anthropologists [Griaule and Dieterlen] started their work in 1931, and they are positive that the Dogon knew details about Sirius B when they arrived ... Eddington revealed the superdensity of Sirius B around 1926 ... so there is a narrow period ... when one has to imagine some group of amateur Western astronomers rushing out to ... Mali and implanting this knowledge in the presumably pliant minds of the Dogon." (3)

The Dogon account for their 'forbidden' knowledge, however, appears equally unlikely. They claim that a people from the Sirius system called the 'Nommo' or little blue people, visited Earth thousands of years ago.

The Nommos were described as ugly, amphibious creatures that resembled mermen and mermaids. (Incidently, it should be remembered that humans and other mammals originally evolved from amphibians.)

According to Dogon legend, the Nommos lived on a planet that orbits another star in the Sirius system. They landed on Earth in an 'ark' that made a spinning descent to the ground with great noise and wind. Temple gives the following account of this event. "The [Dogon] descriptions of the landing of the ark are extremely precise. The ark is said to have landed on the earth to the northeast of the Dogon country, which is where the Dogon claim to have come from originally.

"The Dogon describe the sound of the landing of the ark. They say the 'word' of the Nommo was cast down by him in the four directions as he descended, and it sounded

like the echoing of the four large stone blocks being struck with stones by the children, according to special rhythms, in a very small cave near Lake Debo. Presumably a thunderous vibrating sound is what the Dogon are trying to convey. One can imagine standing in the cave and holding one's ears at the noise. The descent of the ark must have sounded like a jet runway at close range." (4)

The Dogon claim that not only did the Nommos give them knowledge about Sirius B, they also advised that Jupiter has four major moons, that Saturn has rings, and that the planets orbit the Sun. Much of this knowledge was not accepted or known until recent centuries.

These, then, are the two known accounts of how the Dogon received their knowledge of Sirius B (the tiny dot to the lower right of the large star Sirius.) Whilst Sagan's theory has more immediate appeal, it does not account for a 400 year old Dogon artifact that apparently depicts the Sirius configuration, nor the ceremonies held by the Dogon that can be traced back to at least the 13th Century to celebrate the cycle of Sirius A and B, nor how they knew about the super density of Sirius B, a fact only discovered a few years before the anthropologists recorded the Dogon story.

These facts are enshrined in ancient Dogon rituals, portrayed in sand drawings, built into their sacred architecture and can be seen in carvings and patterns dating back hundreds if not thousands of years.

So, how can this knowledge be accounted for? It certainly predates the modern 'discovery' of Sirius B by hundreds of years and therefore any talk of westerners contaminating the Dogon traditions becomes irrelevant.

Yet it is unlikely that if the Dogon had had early contact with an extraterrestrial race that this would have happened in isolation. We know that the Dogon originated elsewhere in Africa spreading out to Mali by the 13th to 16th centuries. There should therefore be evidence of this contact, if it did happen, in the traditions of other related cultures.

And there is, for the creatures described by the Dogon also feature in Babylonian, Greek and Sumerian mythology.

From Berossus, a Babylonian priest, there is a description of creatures known as the 'Annedoti', the 'Repulsive Ones'. These Annedoti were fishmen who introduced civilization. The first and most famous of these was called 'Oannes' or 'Oe', who instructed the Babylonians "in everything which could tend to soften manners and humanize mankind" (5).

Fishbodied aliens are also featured in Greek mythology, notably in the island of Rhodes, with its culture-bearing gods, the "Telchines". (the hounds of Actaeon, according to legend, were the survivors of the Telchines.) Diodorus Siculus, the Greek historian, wrote that they were "the discoverers of certain arts and introduced other things which are useful for the life of mankind." (6). Other texts speak of them being "submarine magic spirits". They had "dog's heads and flippers for hands" (7). The Philistines also worshipped "Dagon and Atargis," two amphibian deities who had human bodies but the tails of fish.

There is also some evidence to tie the Dogon claims into Egyptian mythology. The

Egyptian dog god Anubis is often identified with Osiris, companion of the goddess Isis. Temple concludes that as Isis herself was identified with Sirius, it is reasonable to suppose that her companion was identified with the companion of Sirius, suggesting that the Egyptians knew of the existence of Sirius B.

Temple realized the implications of his work: "When I started writing this book [The Sirius Mystery] in earnest in 1967, the entire question was framed in terms of an African tribe called the Dogon ... the result in 1974 is that I have been able to show that the information which the Dogon possess is really more than 5000 years old and was possessed by the Ancient Egyptians in the pre-dynastic times before 3200BC." (8)

It is this Egyptian connection that is so intriguing. We have already seen that from nowhere, the Egyptians suddenly formed a technologically proficient society with astronomical, mathematical and other knowledge that should have been unknown to them. Could the basis of Von Daniken's claims (as opposed to the evidence he draws on to support them) be accurate?

There is one piece of scientific fact that could prove or disprove the claims once and for all, for the Dogon speak of a third star, Sirius C, around which the Nommos' planet revolves. If the existence of this star is verified then the rest of the Dogon claims would have to be taken as probable fact. To date, however, there is no information on the existence of Sirius C. (It should be remembered that it was as late as 1930 that a planet was discovered in our own solar system, so Sirius C could well be undiscovered.)

Yet what we do have is a wealth of information regarding possible extraterrestrial contacts with the planet Earth, and when put together with the Dogon claims, the puzzles over forbidden knowledge, and pictorial evidence, a convincing case appears to emerge.

It is all too easy to assume that the extraterrestrial phenomenon is a product of a latter-day television age and gullibility. Yet sightings of mysterious objects in the sky go back into the depths of history.

Of course the further one goes back, the more fact, myth, culture and religious illustration become blurred, however there are some 'facts' that defy reasonable explanation.

One of the earliest possible 'records' of extraterrestrial contact was discovered by Tschi Pen Loa formerly of the University of Peking. He found drawings some 47,000 years old on a Hunan Mountain and on an island in Lake Tungting. These granite pictures showed people with large trunks and cylindrical objects in the sky on which similar figures are seen standing (9).

However, probably the earliest authenticated report of a UFO can be found in an ancient Indian text called the Samarangana-Sartradhara that dates back to at least 500BCE. In one passage of this text, there is a description of curious machines called 'vimanas', which can fly and be controlled by pilots. The same devices are described in the Hindu epics Mahabharata and Ramayana as military machines with the capability of carrying 'death' to anywhere in the world.

Roman writers make reference to strange sights in the sky. Livy (59 BCE-AD 17) described a 'sighting' in 214 BCE at Hadria in Italy that looked like an alter in the sky. Pliny the Elder (AD23-79) refers to 'gleaming beams in the sky' in his De Rerum Naturae, which

describes how, in 66BCE, a 'spark' fell from a star to the Earth, became as large as the Moon, and then, shrinking in size returned to the sky.

Inevitably we can only speculate as to what was seen. Others who believe in ancient contact have presented cave and rock paintings in support of their arguments.

Such pictures have been quickly dismissed by others who claim that they are merely pictures of hunters wearing ceremonial headdresses or masks as a ritual part of their culture. Whilst this may be an acceptable explanation, it does not account for the similarity of pictures from cultures on opposite sides of the oceans thousands of years ago. For example, a picture from a prehistoric rock carving near Capo di Ponte in Italy, and a picture from the Toro Muerte Desert in Peru, on the other side of the Atlantic Ocean, show the headgear drawn is almost identical.

Of course, too much can be read into a couple of primitive pictures, if that's all that existed, but it in fact there are other strange representations noted in pictures and images throughout the world. For example, one ancient aboriginal cave drawing from 5000 years ago appears to show strange beings with nonhuman features.

In 1961, the Russian astronomer Alexander Kazantsev brought to the attention of the readers of the then Soviet magazine 'Smena' a discovery made by Henri Labote in the Tassili plateau in the Sahara desert. Labote had found sculpted rocks showing figures with strange rounded heads and other mysterious scenes. These sculptures have been dated to circa. 6000BCE (10).

These images are all the more remarkable because of their similarity to the costumes worn in rituals of the Kayapo Indians of Brazil, a tribe that has existed for at least 4000 years. This tribe's rituals commemorate Gods descending from the heavens bringing with them advanced knowledge and skills.

The ceremonial costume represents such a 'Teacher from Heaven.' Its resemblance to a modern day astronaut's suit is remarkable.

Similarly a 3000-year-old statue found on the Equador-Bolivian border also appears to represent a humanoid in a space suit.

Yet caution has to be advised when considering these ancient images for we can only cast modern day man's eyes over them and offer a modern interpretation of what our ancestors were attempting to record.

For some of the images, however, our knowledge of past cultures can offer a better insight into what the artists are trying to portray. For example, at first glance, the Egyptian mural appears to show in the upper left-hand area a helicopter, with the upper right image appearing to be a boat or even a submarine. The image below that resembles an airplane (or even a UFO) and the bottom image could be taken as a jet-plane.

Yet, in fact, the hieroglyphs are not a record of ancient knowledge of machines similar to modern technology, but merely a coincidental combination of quite common ancient Egyptian symbols.

Again, a Japanese Dogu sculpture has been proposed by some as the representation of a 'space-visitor'.

This 5000-year-old artifact shows a figure wearing what appears to be a helmet, and even goggles that should not have existed in that period of history.

However, although looking bizarre and out of place, the sculpture can hardly be deemed proof of extraterrestrial contact.

Nevertheless some of the ancient images are quite intriguing.

Whilst one Neolithic cave painting from circa 3000BCE from southwest France seems to depict a landscape rich in wildlife but with strange circular discs dotted around the image, other ancient pictures appear to be much more explicit.

Take for example this cave painting from circa 2000BCE found on the Russian-Chinese border. It could of course be argued that our modern eyes can only interpret pictures in certain ways, however (and perhaps falling into this trap) it appears that the figure closest to the viewer is clutching some form of dial, the furthest away individual has a helmet on with antenna, and what appears to be a UFO under some form of propulsion hovering above them both. Few of the features in this picture appear compatible with images that should have formed the everyday world of ancient man.

One picture appears all the more convincing when compared with the plate which appears to show a type of alien known as a 'Grey' and a 'UFO'. This plate is thousands of years old, however the idea of 'Greys' is supposedly a totally modern concept, first featured in Hollywood blockbusters.

It will be remembered that other images of UFOs and alien type figures and astronauts also featured on the stones at Ica, whose origins are lost in the depths of time.

One of the earliest 'UFO' reports came from Ancient Egypt. Writer Brinsley Le Poer Trench quotes in his book 'Sky People' from a papyrus found amongst the papers of Professor Alberto Tulli, former director of the Egyptian museum at the Vatican. The papyrus was from the original annals of Pharaoh Thutmose III (d.1436BCE), the grandfather of the intrepid Thutmose IV who had investigated the pyramids. Unfortunately it was badly damaged with many of the hieroglyphics being unreadable. Despite this Prince Boris de Rachewiltz was still able to offer a translation:

"In the year 22, of the third month of winter, sixth hour of the day ... the scribes of the House of Life found it was a circle of fire that was coming in the sky ... it had no head, the breath of its mouth had a foul odor. Its body one rod long and one rod wide. It had no voice. Their hearts became confused through it; then they laid themselves on their bellies ... they went to the Pharaoh ... to report it.

"His majesty ordered ... has been examined ... as to all which is written in the papyrus rolls of the House of Life. His majesty was meditating on what had happened. Now after some days had passed, these things became more numerous in the sky than ever. They shone more in the sky than the brightness of the sun, and extended to the limits of the four supports of the heavens ... Powerful was the position of the fire circles. The army of the Pharaoh looked on him in their midst. It was after supper. Thereupon, these fire circles ascended higher in the sky towards the south..." (11)

There is also a written account of a 'contact' between humans and 'space' people that is said to have taken place during the reign of Charlemagne (742-814 AD). According to one account (12), a spacecraft took a group of humans into space and later returned them, only to find those left behind were convinced that the humans were members of the 'space race' who were viewed as sorcerers. The returning humans were seized, tor-

tured and many put to death.

The contemporary account records, "one day, among other instances, it chanced at Lyons that three men and a woman were seen descending from these aerial ships. The entire city gathered about them, crying out that they were magicians and were sent by Grimaldus, Duke of Beneventum, Charlemagne's enemy, to destroy the French harvests.

"In vain, the four innocents sought to vindicate themselves by saying they were their own countryfolk, and had been carried away a short time by miraculous men who had shown them unheard of marvels, and had desired them to give an account of what they had seen."

It appears that even Christopher Columbus witnessed a anomalous aerial phenomena. He was on the deck of the Santa Maria at about 10pm on 11th October 1492 when he saw a "light glimmering at a great distance."

He summonsed another member of the crew who also watched as the light vanished and reappeared repeatedly.

The following century, on 4th April 1561, an aerial battle apparently took place over the city of Nuremberg. A contemporary account made reference to a "very frightful spectacle" in which luminous globes, crosses and tubes appeared to fight one another for about one hour in broad daylight.

All then fell to the ground 'as if on fire'. The citizens of Nuremberg believed they had been given a divine warning to improve their sinful ways.

Then just five years later, a similar event occurred in Basel, Switzerland and is represented in a 16th century woodcut. On this occasion, dark balls similar to those seen at Nuremberg filled the sky. "Many became red and fiery, ending by being consumed and vanishing" wrote one Samuel Coccius who reported the events of 7th August in the city's gazette. Such accounts are not limited to Europe.

Records of strange lights over Japan go back at least to the 10th century whilst in May 1606 residents of the (former) capital of Japan, Kyoto, saw a succession of fireballs in the sky. One of them hovered near the Nijo castle in front of a host of witnesses spinning like a wheel (13).

Of course we can never know exactly what was seen, it may well have been a little known phenomena called 'ball lightening'. One previously unpublished photograph shows this phenomena in the northeast of England in 1997. However it is difficult to conceive of any natural event that could lead to an observer detailing an event "in which luminous globes, crosses and tubes appeared to fight one another for about one hour in broad daylight."

Literature from medieval Europe also appears suggestive if not necessarily indicative of UFO sightings. One of the earliest references is in the works of St Gregory, 6th Century Bishop of Tours in France.

In his 'Historia Francorum' he related how, in 584AD "there appeared in the sky brilliant rays of light which seemed to cross and collide with one another," while in the following year "in the month of September, certain people saw signs, that is to say rays or domes such as are customarily seen ... to race across the sky." Elsewhere he describes 'golden globes' that on a number of occasions flashed across the French skies. However

despite these descriptions, these 'lights' are in all probability natural phenomena. The 11th century painting also appears to show another natural phenomenon, a meteorite.

However there are accounts of objects sighted in the sky that seem to fall outside the 'natural' category. One such event took place at about 9.45pm on the evening of 18th August 1783 when four witnesses on the terrace of Windsor Castle observed a luminous object in the skies of the Home Counties of England. The sighting was recorded the following year in the Philosophical Transactions of the Royal Society.

According to this report, witnesses observed an "oblong cloud moving more or less parallel to the horizon. Under this cloud could be seen a luminous object which soon became spherical, brilliantly lit, which came to a halt ... This strange sphere seemed at first to be pale blue in color but then its luminosity increased and soon it set off again towards the east. Then the object changed direction and moved parallel to the horizon before disappearing to the southeast ... the light it gave out was prodigious; it lit us everything on the ground." The image was captured in an aquatint created by Thomas Sandby (a founder of the Royal Academy) and his brother Paul, both of whom witnessed the event. Tiberius Cavallo, one of the group who witnessed this event, concluded that all they had witnessed was a meteor, yet the movements and general descriptions of the object seen do not appear to support this idea.

In 1809 the Journal of Natural History and Philosophy and Chemistry published the experience of John Staveley, an observer at Hatton Garden, London. This observer was astonished by the sight of 'many meteors' darting round a black cloud during a thunderstorm. "They were like dazzling specks of light, dancing and traipsing thro' the clouds. One increased in size till it became of the brilliancy and magnitude of Venus, on a clear evening. But I could see no body in the light. It moved with great rapidity and coasted the edge of the cloud. Then it became stationary, dimmed its splendor, and vanished." (14)

Historically, ocean sightings have been common. Since 1760 seamen have recounted sightings of unidentified flying objects in the form of a wheel. On 15th May 1879, a passenger aboard a ship, the 'Vultur' in the Persian Gulf watched as "two giant, luminous wheels" spun slowly towards the ocean. They were seen for thirty-five minutes and had an estimated diameter of forty meters and were about four meters apart. A similar phenomenon was reported to have taken place in the same area a year later in the same part of the ocean but from another ship, the 'Patna' (15).

In 1906 as a British steamer ploughed its way through the same gulf near Oman in 1906, an enormous wheel of light appeared. The vast 'wheel', apparently bigger than the ship itself, was revolving in the sky not far above the surface of the water at that point. Vivid shafts of light emitted from the huge wheel and passed right through the steamer, although these beams of light did not disrupt the functioning of the ship. This sighting of 1906 was one of eleven reports between 1848 and 1910 (16). Like most of the accounts, this one remarked on the eerie silence of the phenomenon. It could of course be argued that the sightings were merely visions of seamen too long at sea.

Yet a French token was minted in 1680 and appears to show such a wheel spinning in the sky over a hundred years before the first written account that remains available to us. Quite why the token was minted is now lost in history but it has been suggested that

the design may be to commemorate a daytime UFO sighting.

In June 1881, the two sons of the Prince of Wales (one of whom was later to ascend to the throne as George V) were steaming off the coast of Australia when they noted an object in the sky that appeared to be an airborne, fully illuminous ship (17).

Then on 12th August 1883 it appears that for the first time ever a 'UFO' was captured on camera. It happened at the observatory at Zacatecas, eleven thousand feet up a Mexican mountain.

The director, Jose Bonilla, had been observing 'formations' of circular objects that crossed the Sun on a west-east course. He counted 283 of the objects and was able to photograph one with a camera attached to a telescope.

Bonilla later reported in the astronomical press, "I was able to fix their trajectory across the solar disk ... some appeared round or spherical, but one notes in the photographs that the bodies are not spherical but irregular in form. Before crossing the solar disk these bodies threw out brilliant trains of light but in crossing the sun they seemed to become opaque and dark against its brighter background." (18)

One of the objects Bonilla photographed resembled a "five-pointed star with dark centre." It was suggested that he had only observed birds or insects crossing the path of his telescope, however Bonilla calculated that they appeared not as far out as the Moon.

Strange objects also are noted in paintings of biblical scenes. One 14th century fresco depicts the crucifixion and shows a man traversing the sky in an egg-shaped vehicle. The image is from a fresco in the Visoki Decani monastery and is called the 'Crucifixion'.

In the upper two sides of the fresco, which pictured the crucified Jesus, two objects are painted which could be interpreted as being ancient 'spacemen' in aerial crafts.

Another Russian fresco/icon has been interpreted as showing Jesus entering (or leaving) a vehicle which seems to emit rocketlike rays that throws (or protecting their eyes by throwing themselves) the near crowd to the ground.

One fresco is from the 15th Century and found near Kiev. However it is prudent to be cautious when considering such biblical images, for the Bible yields dozens of stories that later painters could interpret as space vehicles.

Yet the concept of extraterrestrial intervention in religion has strong roots and has been explored by many authors, using the Bible itself as a point of reference. Authors such as Mistaki, Le Poer Trench and Soviet astronomer Kazantsev suggest that angels could actually be 'spacemen'.

"According to Genesis 19:3 Lot took the two angels he met at the gate of Sodom to his house 'and made them a feast, and did bake unleavened bread, and they did eat.' But according to dictionary definitions angels are spiritual, ethereal beings. Angels who ate with Lot could not have been such beings ... Rev. H. Wipprecht of Cobalt, Canada, says that the Bible's description of angels fits 'intelligent beings' from other planets. In the Old Testament these 'mysterious messengers' were said to regularly visit the Earth from the sky, and on occasion actually intermarried with human beings. The angels who married earth women could not have been 'heavenly spirits.'" (19)

Le Poer Trench notes other references in Gen. 18:4-5,8: "Let me bring some water for you to wash your feet; you can rest here beneath this tree. I will also bring a bit of

food; it will give you strength to continue your journey. You have honoured me by coming to my home, so let me serve you. They replied, "Thank-you; we accept ... He took some cream, some milk, and the meat, and set the food before the men. There under the tree he served them himself, and they ate."

Le Poer's belief in the extraterrestrial connection at times becomes tenuous, if not necessarily incorrect. He believes the following from Isaiah 13:3,5 is evidence that the 'armies of God' were an extraterrestrial expedition coming from space.

"The Lord has called out his proud and confident soldiers to fight a holy war and punish those he is angry with."

"They are coming from far-off countries at the ends of the earth. In his anger the Lord is coming to devastate the whole country."

However, other puzzling images appear in medieval paintings that cannot be so easily dismissed. For example, in a scene from a medieval tapestry portraying the life of the Virgin Mary, a black domed object can be seen in the background hovering above the skyline.

Equally intriguing is the object hovering in the background in a segment of a Renaissance painting of the Madonna and Child. The object appears to be radiating beams of light. It is difficult to account for such an image by any other means except to accept that it is indeed a UFO.

One such painting was executed for the Annunciation Church at Ascoli Piceno by Carlo Crivelli in 1486 (although some sources cite 1476).

Saint Emidius was the patron saint of the city and in his hands the model of the church can be seen. More intriguingly, however is what appears to be a flying disc in the sky, also emanating a beam of light.

This is perhaps the most remarkable of all the images for the 'UFO' can clearly be seen and is the same shape as commonly reported in the twentieth century, yet the painter Crivelli died in 1495! (The beam of light is also fascinating as many UFO encounters are associated with beams of white light coming from alien craft.)

Such strange phenomena continued to be observed throughout the centuries. On the 6th November 1896 the residents of Sacramento in California observed a light moving slowly across the night sky, apparently carried by a cigar shaped craft. Later in November a trolleyman named Charles Lusk made a further report that he had been standing outside his house and looking up at the sky when he saw a bright light cruising overhead. The craft was later spotted over San Francisco.

Speculation mounted that the craft had been launched by a wealthy but anonymous inventor, and sure enough, in the winter of 1896 a lawyer who became known as 'Airship Collins' announced that he represented a wealthy by anonymous inventor who had assembled the machine in the hills north of Sacramento.

So that was that, until a rival attorney claimed that it was in fact he who was the agent for the unknown inventor, and that two craft had been built, one in California and one in New Jersey. The purpose of the craft? To bomb Havana of course.

Reports of the phenomena continued throughout the month, then from March 1897 a stream of reports from across Texas and neighboring states flooded in, noting lights in

the sky, some like "electric arc lights" others shaped like balls of wheels that were attached to huge craft shaped like a cigar.

The Colony Free Press of Kansas had this explanation for its readers: "The Free Press ... is now of the opinion that the airship is not of this world, but is probably operated by a party of scientists from the planet Mars, who are out, either on a lark, or a tour of inspection of the solar system in the cause of science." (20). Of course, the editor may have been mistaken ... Then by May 1897 the reports ended as suddenly as they had begun.

Of course the reports could have been observations of airships, yet, it was not until 1900, that the development of rigid airships – 'dirigibles' -began, and not in America, but thousands of miles away in Germany. It may be, however, that this late 19th century phenomenon may have more Earthly origins, for it came a mere decade after Jules Verne published his 'Robur le Conquerant,' a book which included an illustration of 'The Clipper of the Clouds'

Yet there is other evidence of strange phenomena around the end of the 19th Century. The following letter was sent to the Editor of Scientific American Magazine by Warner Cowgill, US Consulate, Maracaibo and published on 18th December 1886:

"During the night of the 24th October last, which was rainy and tempestuous, a family of nine persons, sleeping in a hut a few leagues from Maracaibo, were awakened by a loud humming noise and a vivid, dazzling light which brilliantly illuminated the interior of the house.

"The occupants completely terror stricken, and believing, as they relate, that the end of the world had come, threw themselves on their knees and commenced to pray, but their devotions were almost immediately interrupted by violent vomitings, and extensive swellings commenced to appear in the upper part of their bodies, this being particularly noticeable about the face and lips.

"It is to be noted that the brilliant lights was not accompanied by a sensation of heat, although there was a smoky appearance and a peculiar smell.

"The next morning, the swellings had subsided, leaving upon the face and body large black blotches. No special pain was felt until the ninth day, when the skin peeled off, and these blotches were transformed into virulent raw sores.

"The hair of the head fell off upon the side which happened to be underneath when the phenomenon occurred, the same side of the body being, in all nine cases, the more seriously injured.

"The remarkable part of the occurrence is that the house was uninjured, all doors and windows being closed at the time.

"No trace of lightening could afterward be observed in any part of the building, and all the sufferers unite in saying that there was no detonation, but only the loud humming already mentioned.

"Another curious attendant circumstance is that the trees around the house showed no signs of injury until the ninth day, when they suddenly withered, almost simultaneously with the development of the sores upon the bodies of the occupants of the house."

Eleven years later, then House of Representatives member, Alexander Hamilton reported the following:

"Last Monday night, about 10:30 we were awakened by a noise among the cattle. I arose, thinking that perhaps my bulldog was performing some of his pranks, but upon going to the door saw to my utter astonishment an airship slowly descending upon my cow lot, about forty rods from the house.

Calling my tenant, Gid Heslip, and my son Wall, we seized some axes and ran to the corral. Meanwhile, the ship had been gently descending until it was not more than thirty feet above the ground, and we came within fifty yards of it.

It consisted of a great cigar-shaped portion, possibly three hundred feet long, with a carriage underneath. The carriage was made of glass or some other transparent substance alternating with a narrow strip of some material. It was brilliantly lighted within and everything was plainly visible – it was occupied by six of the strangest beings I ever saw. They were jabbering together, but we could not understand a word they said.

Every part of the vessel which was not transparent was of a dark reddish color. We stood mute with wonder and fright, when some noise attracted their attention and they turned a light directly upon us. Immediately on catching sight of us they turned on some unknown power, and a great turbine wheel, about thirty feet in diameter, which was slowly revolving below the craft began to buzz and the vessel rose lightly as a bird. When about three hundred feet above us it seemed to pause and hover directly over a two-year-old heifer, which was bawling and jumping, apparently fast in the fence. Going to her, we found a cable about a half-inch in thickness made of some red material, fastened in a slip knot around her neck, one end passing up to the vessel, and the heifer tangled in the wire fence. We tried to get it off but could not, so we cut the wire lose and stood in amazement to see the ship, heifer and all, rise slowly, disappearing in the north-west.

We went home, but I was so frightened I could not sleep. Rising early Tuesday, I started out by horse, hoping to find some trace of my cow. This I failed to do, but coming back in the evening found that Link Thomas, about three or four miles west of Le Roy, had found the hide, legs and head in his field that day. He, thinking someone had butchered a stolen beast, had brought the hide to town for identification, but was greatly mystified in not being able to find any tracks in the soft ground. After identifying the hide by my brand, I went home. But every time I would drop to sleep I would see the cursed thing, with its big lights and hideous people. I don't know whether they are devils or angels or what; but we all saw them, and my whole family saw the ship, and I don't want any more to do with them.

Hamilton has long been a resident of Kansas and is known all over Woodson, Allen, Coffey and Anderson Counties. He was a member of the house of representatives. He staked his sacred honor on the truth of his story.

An affidavit follows:

As there are now, always have been and always will be skeptics and unbelievers whenever the truth of anything bordering the improbable is presented, and knowing that some ignorant or suspicious people will doubt the truthfulness of the above statement, now, therefore, we, the undersigned, do hereby make the following affidavit:

That we have known Alexander Hamilton for one to thirty years, and that for the truth

and veracity we have never heard his word questioned, and that we do verily believe his statement to be true and correct.

Signed: E. W Wharton, State Oil Inspector

M. E. Hunt, Sheriff

W. Lauber, Deputy Sheriff

H. H. Winter, Banker

H. S. Johnson, Pharmacist

J. H. Stitcher, Attorney

Alexander Stewart, Justice of the Peace

F. W. Butler, Druggist

James W. Martin, Registrar of Deeds

And H. C. Collins, Postmaster.

Subscribed and sworn before me this 21st day of April 1897." (21)

In 1909 strange craft were reported in the skies over Massachusetts. These craft reportedly had powerful searchlights that lit up the ground as they passed overhead. By December of that year a wave of such sightings flooded in from across the New England States (22).

Then on the night of 30th August 1910 above New York City a long black cigar shaped object flew in low over Madison Square in full view of hundreds of people. According to the New York Tribune the object had red and green lights and made airplane engine noises. It circled once round the park then flew away. The following night it returned for a repeat performance (23).

Could this mystery object have been a plane? In 1910 there were only thirty-six licensed pilots in the whole of the United States and following a check by newsmen all planes were accounted for – only one was in the area. It was on Long Island and only had a range of 25 miles. The origin of the craft above New York has never been explained.

Other events have been similarly unaccounted for. One of the most famous of these took place at Edwards Air Force Base; the home of the Air Force Flight Test Center where for more than 50 years it has been at the leading edge of developments in the aerospace world. From America's first jet airplane to the landings of the Space Shuttle, Edwards AFB has seen more major milestones in flight than any other place on Earth mainly due to its ideal location. (Excellent all-year flying weather, relative isolation, varied topography as well as the vast expanse of Rogers Dry lake.)

Then on the night of 7th October 1965 Edwards become famous for another milestone, apparent contact with unidentified objects not from this Earth.

A transcript of the event follows:

Clark: Hello, this is Captain Clark, Alpha Lima.

Reed: Okay, Captain Clark. Lt. Reed.

Clark: Yeah.

Reed: We have some confirmed reports of some unidentified flying objects in your area.

Clark: Okay.

Reed: Approximately six or more from Edwards just south of Victorville. They are moving slowly and climbing slowly. They're red, white and green flashing lights.

Clark: Uh-ha.

Reed: And they have been confirmed on radar. We can't establish what these things are.

Observations of the objects continued with the following conversations being recorded:

Voice 1: Three more of them. Well south and dim.

Voice 2: Okay.

Voice 1: I can still see a red light occasionally out of one of them.

Voice 2: Where are they from? That big bright one.

Voice 1: Beneath him and just a little bit south. And there's three of them almost in a straight line.

Voice 2: Uh-ha.

Voice 1: I don't like being the only one who's seeing these type of things. I still have a contact out there.

Voice 2: Oh, you do? Visual?

Voice 1: Yes.

Voice 2: What are all these objects? Do they look the same as the rest of them?

Voice 1: No, this one just appears to be flashing, nothing red or green involved.

Voice 2: Oh I see. Could be something else.

Voice 1: Alright, I have Alpha Lima in sight now.

Voice: Yeah, he says he's got a contact twelve o'clock, sixteen.

Voice: That's it.

The incident was investigated by former astronaut Dr Edgar Mitchell, who, on the 'Geraldo Rivera Show' stated "This is a real event. I have investigated it myself."

[On 8th July 1947 there were a series of sightings over Edwards AFB then known as Muroc AFB. In the morning of that day two spherical or disc-like UFOs were seen and then joined by a third object. The crew of technicians, all of whom were familiar with the latest aerial technology, observed a white-aluminium UFO with distinct oval outline descending, moving against wind.

Then in the afternoon a thin "metallic" UFO climbed, dove then oscillated over the field and was also seen by a test pilot in vicinity. This F-51 pilot watched a flat object "of light-reflecting nature" pass above his plane. No known aircraft were in the area. (These events were all made subject to sworn affidavits at the time. Astronaut Gordon Cooper also witnesses a UFO episode in 1957/58 at Edwards AFB detailed in 'Space Anomalies')]

There are also more explicit reports of unusual phenomena.

For example on 21st October 1978, a young, but experienced pilot, Frederick Valentich was flying his plane, 'Delta Sierra Juliet' to King Island, midway between Cape Otway, Australia to Tasmania.

At 7:06pm he contacted ground control at Melbourne Flight Service.

Parts of the Flight Service transcript of the ensuing conversation appeared in Australian newspapers including the Sun and the Australian on the morning of 23rd October.

7:06pm

Pilot: MELBOURNE THIS IS DELTA SIERRA JULIET is there any known traffic below five thousand [feet]?

Flight Service Unit: DELTA SIERRA JULIET no known traffic.

Pilot: DELTA SIERRA JULIET I am seems [to] be a large aircraft below five thousand.

Flight Service Unit: DELTA SIERRA JULIET what type of aircraft is it?

Pilot: DELTA SIERRA JULIET I cannot affirm. It is four bright it seems to me like landing lights...

Flight Service Unit: DELTA SIERRA JULIET

Pilot: DELTA SIERRA JULIET the aircraft has just passed over me at least a thousand feet above.

Flight Service Unit: DELTA SIERRA JULIET roger and it it is a large aircraft confirm.

Pilot: ... er unknown due to the speed it's travelling is there any airforce aircraft in the vicinity?

Flight Service Unit: DELTA SIERRA JULIET no known aircraft in the vicinity.

7:08pm

Pilot: MELBOURNE, it's approaching from due east toward me.

Flight Service Unit: DELTA SIERRA JULIET

Pilot: DELTA SIERRA JULIET it seems to me that he's playing some sort of game he's flying over me two three times at a time at speeds I could not identify.

7:09pm

Flight Service Unit: DELTA SIERRA JULIET roger what is your actual level?

Pilot: My level is four and a half thousand four five zero zero.

Flight Support Unit: DELTA SIERRA JULIET and confirm you cannot identify the aircraft?

Pilot: Affirmative.

Flight Service Unit: DELTA SIERRA JULIET roger standby.

Pilot: MELBOURNE DELTA SIERRA JULIET it's not an aircraft it is // open microphone for two seconds //

Flight Service Unit: DELTA SIERRA JULIET can you describe the er, aircraft?

Pilot: DELTA SIERRA JULIET as it's flying past it's a long shape // open microphone for three seconds // [cannot] identify more than [that it has such speed] // open microphone for three seconds // before me right now Melbourne.

7:10pm

Flight Service Unit: DELTA SIERRA JULIET roger and how large would the, er object be?

Pilot: DELTA SIERRA JULIET MELBOURNE it seems like it's stationary what I'm doing

right now is orbiting and the thing is just orbiting on top of me also it's got a green light and sort of metallic [like] it's all shiny [on] the outside.

Frederick Valentich in his Cessna 182 (left-type) then told ground control that the object had apparently just vanished and then asked whether he had seen a type of military aircraft.

7:11pm

Flight Service Unit: DELTA SIERRA JULIET is the aircraft still with you?

Pilot: DELTA SIERRA JULIET [it's ah nor] // open microphone 2 seconds // [now] approaching from the southwest.

Flight Service Unit: DELTA SIERRA JULIET

Pilot: DELTA SIERRA JULIET the engine is rough-idling I've got it set at twenty three twenty four and the thing is [coughing].

7:12pm

Flight Service Unit: DELTA SIERRA JULIET roger what are your intentions?

Pilot: My intentions are ah to go to King Island ah Melbourne that strange aircraft is hovering on top of me again // two seconds open microphone // it is hovering and it's not an aircraft.

Flight Service Unit: DELTA SIERRA JULIET.

Pilot: DELTA SIERRA JULIET MELBOURNE // 17 seconds open microphone //

Flight Service Unit: DELTA SIERRA JULIET MELBOURNE.

There then followed a long 'metallic' noise before all contact ceased. The plane never arrived at its destination, nor did a thorough visual and radio search discover what had actually happened. The plane was equipped with a standard radio survival beacon, thus the radio search, however no signal was ever received (24).

The following day an oil slick north of King Island was observed although no connection with Valentich's plane could be made (either way.)

Former NASA-contracted research scientist, Dr Richard Haines, concluded that this metallic noise which followed the last transmission contained "36 separate bursts with fairly constant start and stop pulses bounding each one; there are no discernible patterns in time or frequency." (25).

Objectors to the idea of UFOs not only claim that nearly all, if not all sightings are misidentified phenomena, but that any such sightings are merely figments of over active American minds.

Yet the reality is, sightings have been made across the world.

There is an image taken above Argentina in 1977.

This huge orb of light was seen by thousands of people and was photographed at Maspalomas on Gran Canaria in 1976. The was photographed at Maspalomas on Gran Canaria in 1976. The picture was released by the Spanish Air Force who could not explain the event.

Another image was photographed by a US Marine Air group pilot over the northeast China Sea during the Korean war.

Reproduced in Timothy Good's 'Beyond Top Secret' Good comments "While the sharply delineated straight line in the middle and the black lower half suggest photographic trickery, similar effects have been noted in other cases."

Of course visual sighting are always open to interpretation (and misinterpretation). Sometimes objects seen in the sky are very real, but also very secret and reports are unlikely to generate a candid response from the military.

One such secret military project was Project Mogul; a US top secret project to develop a means of detecting and monitoring Soviet nuclear weapons which conducted its operations from Alamogordo Army Air Field, New Mexico in June and July 1947 using high-altitude balloon arrays and attached instrument packages (26). It has been claimed that it was the wreckage from one of these Mogul flights that could account for the debris found at the infamous Roswell site, of which more later, and also at another crash at nearby Corona. This is certainly the view of Karl Pflock, a former CIA officer, whose career included a period as Deputy Assistant Secretary of Defence for Operational Test and Evaluation (27). The crash landing of a top-secret project in open territory would undoubtedly have led to the immediate sealing of the area and collection of all recoverable remains.

To demonstrate how easily balloons can be mistaken for UFOs, one photograph shows a high-level cosmic radiation balloon released by a British University and spotted over London, only to be reported as a 'flying saucer'.

Of course many of the reported sightings of UFOs are hoaxes. One picture shows farmer Richard Jennings examining a 'flying disk' that he found on his farm in Chippenham in Wiltshire, England on 4th September 1967 whilst a policeman looks on.

It was one of six found in a straight line from Somerset to Kent – all of which proved to be fakes.

In fact such hoaxes accounted for 33% of all sightings claimed to be UFOs in a formal United States Air Force investigation of the phenomenon in 1949. A further 32% could be accounted for astronomically, 12% were identified as weather balloons, however 23% remained unaccounted for (28).

It is this 23% that has long interested believers in extraterrestrial contact, a belief that has widespread support throughout the scientific community. As Carl Sagan stated "The earth may have been visited by various galactic civilizations many times (possibly in the order of 10,000) during geological times. It is not out of the question that artifacts of these visits still exist, or even that some kind of base is maintained (possibly automatically) within the solar system to provide continuity for successive expeditions." (29)

However, one of the main arguments against the likelihood of such alien contact is that the distances between us and our universal neighbors- even if they do exist - are so great that the possibility of physical contact can almost be ruled out.

But can it be ruled in?

APPENDIX I:

A SELECTED CHRONOLOGY OF HISTORICAL 'SIGHTINGS'

This list is supplemental to episodes detailed in 'Towards the Sky', a gives a further selection of events from the many thousands reported over the past few centuries.

BCE 593 Ezekiel witnesses event which some writers have claimed sounds suspi-

ciously like a UFO encounter. Josef Blumrich, former chief of the systems layout branch of NASA, set out to disprove such suggestions, however, from a careful analysis of the data available, he concluded that the vehicle described in the Bible actually was a UFO. His schematic is shown here.

BCE 218 In Julius Obsequen's book 'Prodigiorum Liber' there are reports of a shield flying through he sky, two moons seen at night, ghost ships in the sky and luminous lamps at Praeneste.

BCE 213 In Hadria, an 'altar' was seen in the sky, accompanied by a man in white clothing.

CE 60 A 'ship' was seen speeding across the sky at night in Scotland.

CE 763 While King Domnall Mac Murchada attended the fair at Teltown in Meath County, ships were seen in the air.

CE 776 A translation of 'Annales Laurissenses' reads: "Now when the Saxons perceived things were not going in their favor, they began to erect scaffolding from which they could bravely storm the castle itself. But God is good as well as just. He overcame their valor, and on the same day they prepared an assault against the Christians, who lived within the castle, the glory of God appeared in manifestation above the church within the fortress. Those watching outside in that place, of whom many still live to this very day, say they beheld the likeness of two large shields reddish in color in motion above the church ..." (1)

CE 919 In Hungary spherical objects shining like stars were reportedly traversing the sky.

CE 927 "In 927 the town of Verdun, like the whole eastern part of France, saw fiery armies appearing in the sky. Flodoard's chronicle reports that they flew over eastern Reims on a Sunday morning in March. Similar phenomena happened several times under King Pepin the Short, under Charlemagne, under Louis I, the Debonair. These sovereign's capitularia mention penalties against creatures that travel on aerial ships." (2)

29.07.966 A luminous vertical cylinder was observed over the ocean.

23.08.1015 Two objects were seen 'giving birth' to smaller luminous spheres over Japan.

1034 A cigar-shaped object surrounded by flames flew over Europe following a straight path from south to east, before turning towards the setting sun. (3)

12.08.1133 A large silvery disk is reported to have come close to the ground in Japan.

01.01.1254 There "appeared in the sky a kind of large ship, elegantly shaped, well equipped and of a marvellous colour" over St. Alban's Abbey on a clear night according to Mathew of Paris' 'Historia Anglorum'. (4)

1290 A large silvery 'flying disk' was observed at Byland Abbey, Yorkshire.

01.11.1461 An object shaped like a ship passed over the town of Arras in France. Jacques Duclerc, a chronicler and counsellor to Duke Philip the Good, provided an account of this sighting in his 'Memoirs of a Freeman of Arras': "A fiery thing like an iron rod of good length and as large as one half of the moon was seen in the sky for a little less

than quarter of an hour." (5)

1520 A round shape with a rotating light or beam, accompanied by 'two fiery suns' was described over the skies of Erfurt. (6)

1752 "Luminous sphere coming out of a bright cylinder" were noted in Augermanland, Sweden.

09.08.1762 An object was observed in front of the Sun by two different observatories in Switzerland.

30.08.1783 An object was observed over Greenwich that 'gave birth' to eight satellites which disappeared slowly towards the Southeast.

07.09.1820 Francois Arago wrote of this date in the 'Annales de chimie et de physique': "Numerous observers have seen, during an eclipse of the moon, strange objects moving in straight lines.

They were equally spaced and remained in line when they made turns. Their movements made a military precision."

.07.1868 At Capiago in Chile and aerial construction was observed emitting light with an engine noise (7).

22.03.1870 An object was seen from the ship "Lady of the Lake" in the Atlantic Ocean that appeared to be a light-grey coloured disk that flew against the wind (8).

29.08.1871 Astronomer Trouvelot of the Meudon Observatory noted a number of objects that resembled those witnessed at Nuremberg and Basel. Among the objects he saw was a circle that first seemed about to fall, then descended "like a disk falling through water." (9)

24.04.1874 A Professor Schafarick saw above Prague "an object of such strange nature that I do not know what to say about it. It was of a blinding white and crossed slowly the face of the moon. It remained visible afterwards." (10)

23.03.1877 Reports of a "cloud cigar" at Vence, France where "fiery speres, extremely luminous, came out of a cloud of peculiar shape and went slowly toward the north for one hour." (11)

24.01.1878 John Martin, a Texas Farmer, observed a dark flying object, the shape of a disk, cruising high in the sky "at a wonderful speed." He used the word 'saucer' to describe what he saw. (12)

1883 The children and teacher at an elementary school at Segeberg reported seeing two fiery spheres in the sky with the apparent diameter of the full Moon. They were reportedly travelling side by side and not very fast, on a north-south course.

01.11.1885 The following report appeared in 'L'Astronomie': "M. Mavrogordato, of Constantinople, calls our attention to the following strange observations which have been communicated to him.

(i) On November 1, at 9:30pm, there was seen, west of Adrianople, an elongated object giving off a strong luminosity. It seemed to float in the air and its apparent disk was four or five times larger than the full moon. It traveled slowly and cast light on the whole camp behind the station with a brightness about ten times greater than a large electric bulb.

(ii) In the morning of November 2, at dawn, a very luminous flame, first bluish, then greenish, and moving at a height of five to six meters, made a series of turns around the ferryboat pier at Scutari. Its blinding luminosity lighted the street and flooded the inside of the houses with light.". (13)

12.11.1887 L'Astronomie reported "On November 12, 1887, at midnight, near Cape Race, a huge ball of fire appeared, slowly emerging from the ocean to an altitude of sixteen to seventeen meters. This sphere started moving against the wind and stopped close to the ship from which it was observed. Then it rushed away in the sky and disappeared in the southeast. The whole observation had lasted five minutes."

08.01.1888 Luminous bodies were seen flying through the sky in lines for one hour, according to the 'Memoirs' of the Minor Brothers of Ragusa, Italy.

1893 Several observations of disks and wheels at sea were made mainly between Japan and China (14).

20.12.1893 A huge 'wheel' emanating noise appeared in the United States. It remained motionless for fifteen minutes before departing.

31.08.1895 At 8:00pm in Oxford England a disk was seen rising above some trees and disappearing into the east (15).

Getting Around the Universe

Mankind first transmitted a dedicated radio message to the stars at 5pm on 16th November 1974 from a radio telescope situated in Arecibo in Puerto Rico, although other radio and television transmissions had been drifting into space for decades; the inadvertent result of normal terrestrial broadcasting. The message sent was a three-minute signal targeted towards a group of stars 24,000 light years away and was primarily intended to be a demonstration that terrestrial radio astronomy had reached a level that would allow interstellar radio communication over vast distances.

The event was also significant, for by sending such a message, the scientists involved were also signalling that they believed there was (or is) some intelligent life 'out there' to receive and respond to their call.

So, what is the possibility of life out there trying to make contact with a race on this planet (I say race, as it cannot be assumed that it is humanity that any 'aliens' may be wishing to contact)?

Frank Drake produced a formula in 1961 that could be used to calculate an answer:

 $N = R \times Fp \times Ne \times Fl \times Fi \times Fc \times L$

Actually, the formula doesn't give an answer as such, for any number generated can only be based on the numbers attributed to each part of the formula. That said, essentially it works like this:

Drake determined that N signifies the number of civilizations in our galaxy attempting to make contact. R stands for the average rate of star formulation and based on observations from the Hubble telescope this is generally accepted to be around ten stars each year.

Fp is the fraction of stars that could contain planetary systems and while there is much debate about this, a figure of one in ten is not unreasonable. Next Ne signifies the

number of these planets that are Earth-like. Based on our own solar system, this could be determined as 1.

Fl stands for the fraction of these Earth-like planets on which life could develop. This is fairly straightforward, either life develops or it doesn't, therefore, Fl is either 1 or 0. If 0, then the overall formula will always generate a figure of zero as well. We will accept the view expressed by Professor Jesco Puttkamer, former Senior Staff Scientist of Advanced Programs of Space Flight, NASA, who, when asked "Could you give me a clear mathematical probability of the existence of life in outer space?" replied "One ... one is certainty." (1) We also now not only believe their might have been life on Mars, but the moons of Jupiter are also being suggested as probable homes for possible microorganisms) so Fl will be 1.

Fi is the fraction of these planets where life has become intelligent. On Earth there are a number of intelligent species, so applying this to Drake's formula, a number between 1 and 4 could be used. Conservatively, this will be determined as 1 (representing humanity on Earth.)

Fc refers to the number of these species that actually want to communicate with us. We are now purely in the realms of speculation, but for arguments sake, it will be assumed perhaps 1 in 10 of these species would want to talk generating a figure of 0.1 for Fc.

Finally L represents the lifetime of a civilization (in years). The first part of this book demonstrated how civilizations can rise and fall, but we will use a figure of 5000 years – from the founding of Egypt to the present day when we are able to transmit signals to the stars (although hopefully mankind will survive somewhat longer.)

Using these figures, the formula calculates that N, (the number of advanced civilizations wanting to make contact) is $10 \times 0.1 \times 1 \times 1 \times 0.1 \times 5000$. This suggests that there are 500 civilizations in this galaxy alone (one galaxy in a universe of 100 billion) who may be trying to contact us.

Having calculated the number of races that might be trying to contact us, the next question is, how could they reach us? Albert Einstein advises us that nothing can travel faster than the speed of light (E=MC2) and late twentieth century space missions to the nine known planets of the Solar System have revealed no signs of intelligent life there. Therefore, any one visiting us must be travelling from outside the Solar System, yet the distances involved suggest that such travel is not achievable.

Space is so infinite that it is measured in 'light years;' that is, the time it would take light to travel any given distance. Light travels at 186,000 miles a second, meaning that light could travel round the planet Earth seven times in one second. It takes 2.5 seconds for light to go to the Moon and back, and eight and a half minutes to travel from the Sun to Earth. It takes light five hours to travel from the Sun to the furthest planet Pluto and to the nearest star, 4.3 years. Thereafter, the time periods appear to preclude the possibility of travel, taking 30,000 years for light to reach the centre of our galaxy; 100,000 years to cross the galaxy, and to reach our nearest galaxy, Andromeda, light takes 2.2 million years. Finally, for light to travel to the furthest known point in the universe it would take fifteen billion years (and the universe is still expanding at an accelerating rate.)

But just as Einstein's equation confined man to never travel at more than the speed of light, his theories on time dilation opened up other possibilities of interstellar travel. Einstein demonstrated that as the traveller speeds up, time for him/her slows down. As Michael White, science editor of 'GQ' explains, "if we imagine for a moment a journey of 50 light years from the alien's home world to Earth. At 0.95c (95% the speed of light), this will take 47.5 years to complete, one way. 47.5 years to the people back home, that is. Because of the consequence of special relativity that, as we travel faster, relative time slows, to the crew of the spaceship, this 47.5 years will only be 14.8 years." (2)

Scientist Stanton B. Friedman, along with coauthor B. Ann Slate, applied this science to establish whether or not claims made by two American so-called 'abductees' could be of any substance.

Betty and Barney Hill alleged that they had been taken on board a UFO while out driving through the White Mountains in New Hampshire in September 1961.

They later sought professional assistance to resolve personal difficulties that later surfaced and, during regression, undertaken by psychiatrist and neurologist Dr. Benjamin Simon, the Hills revealed that they believed they had been taken on board a space craft where they had undergone a detailed physical examination. Following this examination, Betty Hill claimed that a crew-member of the spacecraft had shown her a star map of what were supposedly trade routes and "paths of exploration." During further hypnosis in 1964 Betty Hill reproduced this alleged 'star map' as a drawing.

Unfortunately or perhaps fortunately for Betty if the story was fabricated, no-one could recognize the star chart she had drawn and it therefore neither helped prove nor disprove the story. However an American schoolteacher, Marjorie Fish, undertook the mammoth task of attempting to identify which stars Betty's map could have represented. She constructed three dimensional models of all stars within approximately sixty light years of our own sun, and in July 1969, some five years following the original 'abduction', Fish came across a nine star pattern that appeared to represent the star chart drawn by Betty Hill.

Additional support for the Hill claims came in 1969 when a revised star catalogue was issued. This catalogue containing information that appeared to confirm the Hill's original story, for three of the stars shown on Hill and Fisher's maps were not known to anybody on Earth at the time of the alleged abduction. (These stars were called named Gliese 86.1, 95 and 97.) This information suggested that the 'aliens' who 'abducted' the Hills were from Zeta 1 Reticuli and Zeta 2 Reticuli (the 12th and 13th nearest stars to our Sun), some 176,340,000m miles away. Quite why they should travel 37 light years and simply want to subject Betty and Barney Hill to a medical examination, have a chat around a star map, then dump them back on Earth, has never been adequately explained.

There is no reason to believe that we would ever be able to actually communicate with any such aliens should they manage to reach us. Even on Earth we share the planet with other life forms that are acknowledged as being 'intelligent'. Yet, to date, we have not been able to achieve any real communication outside Hollywood remakes of 1970s Australian television shows and US science fiction programs.

In any event, once the home star system had been identified, Friedman and Slate set

to work. "What this implies," they concluded, "is that the Reticulan crew would not have had to be going faster than the speed of light to pay a visit to our solar system and return facing the prospect of residence in a home for the elderly. Using Einstein's time-change factor, a one way trip at 80% of the speed of light at a constant velocity would take them 22 years. At 99% of the speed of light, it would take them five years and two months, but at 99.9% of that velocity, the trip could be made in only twenty months." (3)

Their calculations for the amount of time the journey would have taken may be correct, but they had forgotten that travelling at the speed of light brings about its own problems. Stephen Hawking explains: "Because of the equivalence of energy and mass, the energy which an object has due to its motion, will add to its mass. In other words, it will make it harder to increase its speed. This effect is only really significant for objects moving at the speed of light. For example, at 10% of the speed of light, an object's mass is only 0.5% more than normal, while at 90% of the speed of light it would be twice its normal mass. As an object approaches the speed of light, its mass rises ever more quickly, so it takes more and more energy to speed it up further.

"It can ,in fact, never reach the speed of light because, by then, its mass would have become infinite, and by the equivalence of mass and energy, it would have taken an infinite amount of energy to get there. For this reason, any normal object is forever confined by relativity to move at speeds slower than the speed of light. Only light, or other waves that have no intrinsic mass, can move at the speed of light." (4)

And there are other complications to this travel. As White points out; "even if we assume alien longevity is greater than ours... crews sent out on round trips of almost a century might return to their home worlds to find the political structure changed. The organization that sent them may no longer exist. Such a crew would find all their relatives either dead or ancient, and almost everything once familiar, irreversibly altered. Imagine a human able to set out on a mission in the year 1900 returning to Earth in 2001. They would have aged about thirty years, but the world would be almost unrecognizable to them." (5)

So, it would appear that such travel is less than likely, but then, as science appears to close one door, it offers new opportunities. One such opportunity could be 'wormholes'. This idea was first proposed by Kip Thorne and Michael Morris in 1987 in the American Journal of Physics as a 'follow through' of previous work by Albert Einstein.

In 1915 Einstein had announced his theory of general relativity. This explained that gravity was not a force of attraction between two bodies, but a property of space-time itself. This is best explained by imagining a sheet of rubber stretched over a wooden frame. On the rubber sheets are placed a number of balls of different sizes and weights (representing planets and stars.) If you were to roll a ball across the surface of the sheet, the ball would be 'attracted' to the others as it rolls down the slope towards them. Now if one of the balls was extremely small and also immensely heavy, it would stretch the rubber to an infinite extent without ripping it. This is a 'Black Hole.'

Thorne and Morris recognized that two such Black Holes could 'find' each other and join up, thus creating a gateway through space through which a craft could travel enormous distances in short periods of time. Hawking, however, urges a note of caution, "at first, this form of space travel seemed possible... Later work, however, shows that these

solutions are all very unstable: the slightest disturbance, such as the presence of a spaceship, would destroy the 'wormhole,' or passage, leading from the black hole to the white hole. The spaceship would be torn apart by infinitely strong forces. It would be like going over Niagara in a barrel." (6)

It appears that the options for space travel are running out. However, another method of space travel might be by stepping outside our three dimensional universe. Again, Hawking explains;

"One can picture this in the following way. Imagine that the space we live in has only two dimensions and is curved like the surface of an anchor ring or Torus. If you were on one side of the inside edge of the ring and you wanted to get to a point on the other side, you would have to go round the inner edge of the ring. However, if you were able to travel in the third dimension, you could cut straight across." (7)

Such talk of extra dimensions can be confusing. It is certainly easier to grapple with the following concepts in two and three dimensions, and once the concept is grasped, to then relate it to additional dimensions.

To help with this, it will be useful to enter a world created by clergyman Edwin Abbot, headmaster of the City of London School.

He wrote a book entitled 'Flatland: A Romance of Many Dimensions' where everything only existed in two dimensions.

When Flatland interacts with the third dimension events and feats are achieved which appear fantastic and impossible to the two-dimensional Flatlander.

Take for example, placing a Flatlander in prison. All that would be needed would be to draw a circle around the prisoner and escape would be impossible in two dimensions. However, a three dimensional person could pull the Flatlander into the third dimension, making it appear to the jailer that the person has disappeared into thin air.

The three dimensional person could then place the Flatlander back in Flatland at a different location. (If feeling mischievous, he could even flip him over, making it appear that his internal organs were now on the wrong side.)

In fact three-dimensional person could perform all sorts of trickery in the eyes of his two-dimensional counterpart. Three-dimensional man could pass through doors, step into mountains, appear and disappear at will, reach into an object without opening it (a must for medical operations!) enter banks and simply take cash from vaults.... And of course, as noted above, simply step out of prison if caught.

In the Flatland novel therefore, even discussion of the third dimension was strictly forbidden. However, one day, the main character of the Flatland novel, Mr. Square is visited by the mysterious Lord Sphere, a three-dimensional being. Lord Sphere appears to Mr. Square to be a circle that can magically change size as he interacts with Flatland. Lord Sphere tries to explain that he comes from another world called Spaceland, where all objects have three dimensions, however Mr. Square stubbornly refuses to believe that a third dimension can exist. Eventually Lord Sphere peels Mr. Square off Flatland and throws him into Spaceland.

The flat Mr. Square drifts in the third dimension like a sheet of paper in the wind, and as he can only visualize two dimensional slices of three dimensional objects, he views a

world where objects change shape and even appear and disappear into thin air. On returning to Flatland he tells his fellow Flatworlders of his adventure, but is considered mad and thrown into prison, condemned to spend the rest of his days in solitary confinement.

This image assists in recognizing the difficulties we might face should we travel through a higher dimension, and, should others be travelling to us in these higher dimensions, it explains how some reports of UFOs appear to come out of nowhere or travel large distances in the blink of an eye. (Perhaps they are not travelling, but disappearing and reappearing, with our eyes tricking us into believing they have travelled in a line.)

An English mathematician, Charles Howard Hinton (who, like Einstein also worked in a patent office) spent most of his adult life obsessed with this notion of other dimensions. (8)

Hinton developed a number of methods by which the average person could 'see' four-dimensional objects, and eventually he perfected special cubes that could allow others to visualize hypercubes (cubes in four dimensions.) These became known as Hinton's cubes (Hinton himself also coined the official name for an unraveled hypercube; a 'tesseract'.)

Michio Kaku in his excellent book, 'Hyperspace' explains the function of the cubes. "As an analogy, take a three-dimensional cube. Although a Flatlander cannot visualize a cube in its entirety, it is possible for us to unravel the cube in three dimensions, so that we have a series of six squares making a cross. Of course, a Flatlander cannot reassemble the squares to make a cube. In the second dimension, the joints between each square are rigid and cannot be moved. However these joints are easy to bend in the third dimension.

A Flatlander witnessing this event would see the squares disappear, leaving only one square in his universe.

"Likewise, a hypercube in four dimensions cannot be visualized. But one can unravel a hypercube into its lower components, which are ordinary three-dimensional cubes. These cubes, in turn, can be arranged in a three-dimensional cross – a tesseract. It is impossible for us to visualize how to wrap up these cubes to form a hypercube. However a higher-dimensional person can 'lift' each cube off our universe and then wrap up the cube to form a hypercube. (Our three dimensional eyes, witnessing this spectacular event, would only see the other cubes disappear leaving only one cube in our universe." (9)

This concept inspired Salvadore Dali when he painted his famous Christus Hypercubus, which is on display at the Metropolitan Museum of art in New York. The painting depicts Christ being crucified on a four-dimensional cross. Hinton also found another way of visualizing higher dimensional objects; by looking at the shadows they cast in the lower dimensions. For example, a Flatlander can visualize a cube by looking at it's two-dimensional shadow: a cube looks like two squares joined together.

Similarly a hypercube's shadow cast in the third dimension becomes a cube within a cube and, if rotated in four dimensions, executes motions that would appear impossible to our three-dimensional brains.

So do these higher dimensions actually exist?

According to accepted science they do, however "the suggestion is that the other dimensions are curved up into a space of very small size, something like a million million million million million to an inch... if this picture is correct, it spells bad news for would-be space travellers: the extra dimensions would be far too small to allow a space-ship through." (10)

Another possible method that has been muted for getting around the universe is that of time travel. Probably few other concepts have generated so many theories, paradoxes and improvable ideas. Take for example the story 'All You Zombies' by author Robert Heinlein. In this story, a young orphan girl, Jane, is made pregnant by a traveller (later revealed as a time traveller), the baby is born and placed for adoption, but as a result of complications during the birth (when the girl is noted to have both sets of sex organs), she has sex-change operation making her into a man.

Shortly afterwards, the baby is snatched from the hospital, and it's 'mother,' now a man, drops out of society and becomes a vagrant. Seven years later he stumbles into a pub and becomes friendly with the bartender who offers him the opportunity to avenge the original traveller who ruined 'his' life. There was one condition however, he had to join the 'time travel corps.' The pair then go back in time to 1963, the vagrant seduces the young orphan Jane and makes her pregnant before disappearing. The bartender then travels forward in time nine months, snatches the baby from the hospital, travels back in time to 1945, when the baby is left at the orphanage, then the vagrant travels forward to 1985 where he joins the recently created time travel corps.

'Jane' the time traveller, distinguishes 'himself' in the corps, and eventually becomes a highly respected bartender, opens his own place in 1970 and shortly afterwards persuades a young vagrant to join the time travel corps. (11)

Confused? Probably. Yet the story violates no known laws of physics, although the biology (and processes) involved are somewhat dubious.

The story highlights potential problems with time travel with many paradoxes being offered as arguments that it could not happen. For example, the traveller who goes back in time and kills his grandfather before the grandfather meets the traveller's grandmother. The traveller would therefore not have been born, so could not have travelled back, so could not have killed his grandfather, who would then have gone on to meet his grandmother, so he would have existed after all, meaning he could have travelled back, etc.

Is there any scientific basis for time travel? According to leading scientists, including now Stephen Hawking there most certainly is. Okay, the next bit becomes a bit confusing, but bear with it if you can.

If a pulse of light is emitted at a particular time at a particular point in space, then as time goes on, it will spread out as a sphere of light whose size and position are independent of the speed of the source. After one millionth of a second the light will have spread out to form a sphere with a radius of 300 meters; after two millionths of a second, the radius will be 600 meters and so on. (Somewhat like ripples on a pond spreading out on the water's surface except in three dimensions in four dimensional space-time.)

This cone is called the 'future light cone' of the event. In the same way, a past light

cone can be drawn, which is the set of events from which a pulse of light is able to reach the given event (12).

Now, the following figure, shows the light cones associated with three points in space-time, A, B and C. Scientist and author John Gribbin explains. "These points know nothing about each other, and have no influence on each other, because for a signal to get from any of these points to either of the others it would have to pass outside the respective light cones, travelling faster than light. But as time passes, observers who begin from each of these points will follow their own more or less wiggly world lines into the future and up the page.

At some point in the future, the observer who began at point A will receive light signals that come from point B, and this is the first time that such an observer can be influenced by events that occurred at point B. But this observer can never have any influence on events at point B, because to send a signal there it would have to go backwards in time; any interaction is strictly one way." (13)

Now comes the interesting bit. If the universe is rotating (and everything else rotates: planets suns, galaxies etc., so why not?), then space-time will be dragged round in such a way that the light cones (everywhere in the universe) are tipped over. If it is rotating fast enough, then the light cones will tip over so far that an observer who begins from point A can get to point B without ever going outside the future light cone – that is without ever exceeding the speed of light. Using this method you could travel from A to B to C and back round the universe to Point A. (14)

So, could this be a method of practical time travelling? Probably not, but is does indicate that time travel is not forbidden by Einstein's theories of general relativity, and this concept of universal rotation and cone tipping has been the foundation for a number of other theories as to the possibility of time travel.

The idea of time travelling UFOs does appear to explain at least one other point. Researcher Jenny Randles explains. "If you travel a hundred years forward the building that you now work in might by then have been demolished and a busy motorway might run through the position. Your time machine could then appear right in front of a gigantic truck, merrily speeding along, oblivious to your arrival, which flattens you. Any journey backwards by thousands or millions of years could see the spatial location where you have begun your trip hugely altered, submerged under an ocean or raised up inside a volcano, for example. There is just no way that any machine developed for a physical transition through time could do so while remaining on the ground. Indeed, there is only one relatively safe place where such a time transfer could happen – that is well above the surface, or better still, outside our atmosphere altogether." (15)

The idea of time travel could certainly answer some intriguing puzzles. One can almost imagine one such traveller in prehistoric Illinois asking a fellow traveller to hurry up and get back into the time machine. "Hold on, I've dropped something. That gold chain you gave me." "Oh, it'll turn up" comes the reply, only to give one Mrs. Culp her 15 minutes of fame millions of years later.

It should also be noted that time travel could also resolve the distance problem discussed earlier (though simultaneously making Randle's idea redundant.)

This planet, like all others, moves in space-time, for not only is the Earth revolving on its axis once every 24 hours, it is also revolving around the sun once every 365 days, and our galaxy itself is revolving once every 200 million years. There is nothing to suggest the universe itself is also not rotating. This effectively means, that if you went back in time 12 hours, you would not arrive in the same place you left because you would also move in space-time. If the Earth only rotated on its axis, you would be on the opposite side of the earth (1/2 a rotation), however as both the Earth and the galaxy (and perhaps the universe) are rotating, if you stepped back in time by say 500 years, you would no longer be anywhere near the Earth, which would be 500 years away in the direction of rotation. Perhaps careful interstellar mapping and knowledge of universal movement could allow the traveller the ability to simultaneously travel back in time and to planets which rotate into Earth's space-time path.

There are a few more possibilities for travellers to reach us without having to make the full time-consuming journey.

The first is a matter of straightforward physics. Access to complex, subatomic particle accelerators (to the unscientific mind - giant microscopes!) has confirmed that matter, including life matter, is simply made up of light waves. (Indeed Einstein's E=MC2 makes this point, energy = mass x speed of light squared). Put simply, our universe is operating on a certain wavelength. A phased shift, where we simply operate on a slightly different wavelength, may reveal whole new worlds that are beyond our sensory constructs. (Interestingly enough, 'interference' between these wavelengths has been postulated as an answer for ghosts and other paranormal activity) (16).

Such phased shifts may explain how UFOs appear to give off strange glows, dart around the skies at incredible speeds (not speeding but disappearing and reappearing with the mind playing tricks), and not travelling great distances but merely slipping through the same space-time at differing wavelengths.

The idea of parallel universes is, in fact, a matter of sound scientific reasoning, based on quantum theory. A cornerstone to this theory is that light acts both as a wave and a particle.

This can be evidenced by the famous two-slit experiment. Two slits (not surprisingly) are made in a partition. On one side of this partition is a source of light of a particular color (i.e., wavelength). Most of the light will hit the partition but a small amount will go through the slits creating a characteristic 'wave' effect. The same effect is generated, however, when electrons are sent through the slits one at a time. As Hawking notes "each electron, therefore, must be passing through both slits at the same time!" (17)

This appeared to turn much of Einstein's work on its head. "Einstein's general relativity theory is the theory of the cosmos, a theory of stars and galaxies held together via the smooth fabric of space and time. Quantum theory, by contrast, is a theory of the microcosm, where sub-atomic particles are held together by particle-like forces dancing on the sterile stage of space-time, which is viewed as an empty arena, devoid of any content." (18)

Hawking then took quantum theory to its ultimate conclusion, allowing the existence of infinite numbers of parallel universes, effectively meaning that we live within a multi-

verse rather than a universe; an infinite multi-verse connected by an infinite number of wormholes. The possibilities are staggering for, in theory at least, a wormhole could exist within our Solar System connected to an entirely different universe, making space travel no more challenging or impossible than using the current rail systems.

This chapter has attempted to explore possible methods of craft reaching Earth given the practical difficulties that the vastness of space presents to the potential traveller. While some of these ideas appear to rule themselves out as possibilities, the ideas expressed are merely reflections of our current state of knowledge. Fifty years ago the idea of 'light cones', 'hypercubes' and 'wormholes' would themselves have been alien concepts and dismissed by orthodox science.

Who knows what the next fifty years will bring, in either exploring these ideas further or revealing new theories and explanations? Even as recently as October 1996, an article in the scientific journal Nature put forward a theory that a spaceship could be surrounded by a field of 'exotic' elemental matter (or virtual particles which can emit and absorb photons, thus changing their mass for an incredibly short time.) This would have the effect of propelling the spaceship at a speed far greater than light itself (19).

Carl Sagan , the noted astronomer, stated as early as 1968 at a hearing before the House Committee on Science and Astronautics, "Now, one thing is clear, which is this: If there are other technical civilizations, any random one of them is likely to be vastly in advance of our own technical civilization. For example we are only 10 or 15 years into having the technology of interstellar communication by radio astronomy. It is unlikely there is any other civilization in the galaxy that is that backward in their technical expertise." (20)

Twenty-two years after that first message from humanity was transmitted to the stars, the SETI project (Search for Extra Terrestrial Intelligence) reported that they had detected radio signals in the region of Virginis 70, a star in the constellation of Virgo.

Scientists at the University of California in Berkeley detected the original signals and, in order to investigate them further, they attached instruments to their radio telescopes.

They found what they described as a "highly unusual set of signals with a repetitive pattern." (21). Following this period of scientific analysis the scientists were able to conclude that the signals detected were similar to UHF television transmissions.

Radio signals have been detected before in space, but what made this discovery particularly exciting was that astronomers had recently noted that the star has a planet similar to our own, and at a similar distance from our own star.

Designated 70 Vir B, this planet is believed to be over six times the mass of Jupiter and orbits around its Sun in an eccentric orbit every 116 days.

Then in June 1988 it was revealed that some of the world's leading astronomers had collected more than 100 unexplained radio signals during the routine surveillance of space. A report in the British Sunday Times of 7th June 1998 stated, "these faint, pure tones have no natural origin and could have been created artificially, the scientists said. They do not rule out the astonishing possibility that this strange radio traffic could have extraterrestrial origin." (22)

However, many on this planet were convinced that extraterrestrials were already visiting us, and that view was shared by the CIA, the US Air Force and even the American President.

A Time Of Confusion

In 1945 the world emerged battered, bruised and suspicious of itself and its enemies after a war that had threatened its very existence. Each power had faced its own vulnerability and knew that such vulnerabilities could never again be allowed to threaten its way of life. But by 1946 the Cold War was setting in, communications were down and suspicions between east and west were running high. Another world war appeared increasingly inevitable, and military arsenals began to be built up for possible deployment.

Within months mysterious objects began to be seen above the sky of Scandinavia and the Baltic Sea. These objects were called 'ghost rockets' or 'spook bombs;' some flashed across the sky while others hardly moved. The West assumed that the Soviets were testing some new secret weapon, although the Kremlin flatly denied this was the case.

Then on 22nd August 1946, the British Daily Telegraph stated "The discussion of the flight of rockets over Scandinavia has been dropped in the Norwegian newspapers since Wednesday. On that day the Norwegian General Staff issued a memorandum to the press asking it not to make any mention of the appearance of rockets over Norwegian territory but to pass on all reports to the Intelligence Department of the High Command ... In Sweden the ban is limited to any mention of where the rockets have been seen to land or explode." (1)

Swedish military forces were placed on alert (2) and the US sent retired US Air Force General James H. Doolittle to assist the Swedes in their investigation.

Doolittle had entered WWII as a Major in the US Air Force. Following a flight over Tokyo, he was promoted to a one-star general, awarded the Congressional Medal of Honor and sent to North Africa to take command. Later in the war, Doolittle commanded the Eighth Air Force, which played a large role in the defeat of Germany. He went on to undertake a major role in shaping the armed services and national aviation policy.

On arrival in Stockholm, the General met with Colonel C. R. Kempf, the Chief of Swedish Defence and General David Sarnoff, an intelligence expert in aerial warfare. Sarnoff was later quoted as stating that the objects reported were neither mythological nor meteorological but "real missiles." (3)

In October 1946 the Swedish Government announced the results of its inquiry:

"Swedish military authorities said today that they had been unable to discover after four months of investigation the origin or nature of the ghost rockets that have been flying over Sweden since May.

A special communiqué declared that 80 per cent of 1,000 reports on the rockets could be attributed to 'celestial phenomena' but that radar had detected some [200] objects 'which cannot be the phenomena of nature or products of the imagination, nor can be referred to as Swedish airplanes."

Then the following summer an event occurred that was to become known all over

the world and trigger the modern day UFO phenomena. On this occasion, businessman and experienced pilot, Kenneth Arnold flew his private plane across the Cascade Mountains from Chehalis to Yakima in Washington. Arnold was particularly vigilant during this flight as he was aware of the offer of \$5000 to anyone who could locate a missing C-46 transport aircraft belonging to the US Marine Corps that was believed to have crashed near Mount Rainier with thirty two men on board.

Arnold was 9200ft above the town of Mineral, 25 miles southwest of Mount Rainier, and making a 180 degree turn when he reported that a "tremendously bright flash lit up the surfaces of my aircraft." Although initially startled, Arnold quickly concluded that the light was simply a reflection from some other nearby plane. Then he saw another flash. "I observed far to my left and to the north, a formation of very bright objects coming from the vicinity of Mount Baker, flying very close to the mountain tops and travelling at tremendous speed."

Arnold calculated that the craft were travelling at over 1700mph. "They didn't fly like any aircraft I had seen before ... they flew in a definite formation, but erratically ... their flight was like speed boats on rough water or similar to the tail of a Chinese kite." (4)

Arnold's episode was confirmed by a little known letter sent on 20th August of that year to the Air Force and found later in the files of Project Blue Book, the last official US investigation of the UFO phenomenon:

"Sir. Saw in the Portland paper a short time ago in regards to an article in regards to the so called flying disc having any basis in fact. I can say I am a prospector and was in the Mt. Adams district on June 24th the day Kenneth Arnold of Boise Idaho claims he saw a formation of flying disc. And I saw the same flying objects at about the same time. Having a telescope with me at the time I can assure you they are real and nothing like them I ever saw before they did not pass very high over where I was standing at the time. Probably 1000ft. They were round, about 30 foot in diameter tapering sharply to a point in the head and in an oval shape. With a bright top surface. I did not hear any noise as you would from a plane. But there was an object in the tail end looked like a big hand of a clock shifting from side to side like a big magnet. There speed as far as ii know seemed to be greater than anything I ever saw. Last view I got of the objects they were standing on edge Banking in a Cloud.

Your Respectfully,

(Fred Johnson.)

(Note: The Blue Book file page which contains this letter is labelled "A TRUE COPY" that was authenticated by Lt. Col. Donald Springer. The errors in the text are from the original letter. (5) See Appendix 1)

Arnold's account augured a flurry of similar reports – in fact eight hundred and fifty similar sightings were reported to the US Authorities between June and July of 1947 alone. Arnold later published details of his experience and the term 'flying saucer' entered the public domain following a newspaper interview he gave shortly after his experience.

Of course, at the time, the immediate governmental response wasn't that there was an alien presence in the sky, but that more Earthly enemies had developed technologies

that could pose a threat to the United States.

Then in July of that year, 1947, an event occurred that decades later is still a matter of intense speculation and controversy; an event that has fed decades of allegations of conspiracies, cover-ups, suppressed information and dissemination of disinformation. Hardly surprising, perhaps, when the event triggered a headline 'RAAF Captures Flying Saucer On Ranch in Roswell Region' and was authorized by the American Air Force itself.

The report that generated this headline was released by Walter Haut, the Public Information Officer at the Roswell Army Air Force Base and was based on events that occurred during a violent thunderstorm during the first week of July 1947. During that storm something crashed on the J. B. Foster Ranch, some 75 miles northwest of Roswell.

The following morning, ranch manager William "Mac" Brazel discovered fragments of unusual debris scattered over the ranch. In no great hurry, Brazel waited a few days before driving in to Roswell where he advised Sheriff George Wilcox of the find. Wilcox duly informed the Roswell Army Air Field, home of the 509th Bomb Group, the world's first atomic bomb unit (6) and Brazel then spent the whole of 8th July 1947 day at Roswell Army Air Field before being given a military escort to the offices of the Roswell daily Herald where he refuted the crashed saucer story, merely describing a small volume of debris of no more than five pounds in weight.

Major Jesse Marcel, the unit's Intelligence Officer, together with Captain Sheridan Cavitt, a Counter Intelligence Corps officer, accompanied Brazel back to the site. Marcel stated in a 1979 interview "we found some ... small bits of metal, but mostly we found some material that's hard to describe... I'd never seen anything like that, and I still don't know what it was ... I lit a cigarette lighter to some of this stuff, and it didn't burn." There were also "small, solid members that you could not bend or break, but it didn't look like metal. It looked more like wood. They varied in size ... perhaps three-eighths of an inch by one quarter of an inch thick ... None of them were very long." Marcel also stated that he had seen unusual two-color 'hieroglyphics' on some of the pieces as well as parchment like material (7).

The area surrounding the crash was sealed off and all the remaining debris was collected and removed by the military. William Haut, the press officer, stated in an interview with Timothy Good that he "had a call from Colonel Blanchard [Commander of the 509th Bomb Group], and he told me to report to his office ... He gave me the basic facts that he wanted to put in a news release ... that we had in our possession a flying saucer. A rancher had brought parts of it in to the Sheriff's office, and the material was flown to General Ramey, who was Commanding General of the Eight Air Force." (8)

Marcel was then ordered to load the debris onto available aircraft and fly it Fort Bliss before it was moved to Wright Field (now Wright Patterson AFB) at Dayton, Ohio for examination.

During an intermediate stop, Ramey took charge of the operation and those involved were sworn to secrecy. (In a 1991 sworn affidavit, General Thomas Dubose, who was then a colonel and General Ramey's (of Roswell AFB) deputy, claims that he and Ramey received orders directly from General McMullen in Washington to hide the real UFO debris and replace it with balloon debris.)

Sure enough, within 24 hours, the original story of the 'Flying Saucer' was retracted and a somewhat uncomfortable looking Jesse Marcel was photographed posing along-side General Ramey with a piece of the 'debris' and announcing that the object was not a flying saucer after all but merely debris from a crashed weather balloon.

Whether it was a flying disk or not, we do now know that this account was untrue for the Air Force have recently retracted that particular story and replaced it with another one that no one believes either. They now claim that the predecessor to the US Air Force, the US Army Air Forces recovered debris from an Army Air Forces balloon project codenamed Project Mogul.

As for the 'alien bodies' allegedly found at the crash site; these were apparently anthropomorphic test dummies that were taken up into the skies by US Air Force high altitude balloons for scientific research (9).

Just as Roswell has earned a place in UFO history, the name of George Adamski has also become synonymous with the UFO phenomena. An uneducated Polish immigrant to the United States, Adamski claimed to have seen his first 'spacecraft' in 1946, and then a large fleet of them (around 184) in 1947.

Then on 20th November 1952, according to Adamski, he and six friends were driving near Desert Centre, California, when they spotted a cigar shaped craft settling gently down on the ground about a mile from the road.

Adamski approached the craft and was allegedly greeted by an alien with shoulderlength blond hair and wearing what appeared to be a ski-suit. What made Adamski's account seem plausible to many people was that his six travelling companions apparently witnessed the event.

When Adamski detailed his experiences in a book entitled 'Flying Saucers Have Landed' he ensured the work contained photographs of the witnesses' testimonies which had been signed before notaries public.

They read "We, the undersigned, do solemnly state that we have read the account herein of the personal contact between George Adamski and a man from another world, brought here in his Flying Saucer "Scout Ship." And that we were a party to, and witnesses to the event as herein recounted."

Over the years Adamski claimed these alien contacts developed and he was taken on trips to Mars, Jupiter, Saturn and Venus. On one of these excursions Adamski claimed to have been shown the far side of the Moon where he gazed upon "cities, forests, lakes, snow capped mountains ... even people strolling around the sidewalks." When the Soviets released photographs of the far side of the Moon in 1959, Adamski merely claimed that the Soviets had retouched the prints "in order to deceive the United States." Conspiracy theorists make similar claims today regarding official photographs.

Clearly Adamski had issues, yet there is a further intriguing element to his apparently wild story. He died on 23rd April 1965, at a time before his supporter's illusions were shattered by the introduction of cold facts, yet he gave the following account of his first so-called space flight in 1955, years before Yuri Gagarin became the first known human to travel in space on 12th April 1961.

Adamski claims he was offered the chance to see what space really looked like from

a spacecraft. He stated: "I soon forgot my disappointment as I looked out. I was amazed to see the background of space is totally dark. Yet there were manifestations taking place all around us, as though billions of fireflies were flicking everywhere, moving in all directions as fireflies do." Compare these words with those used by astronaut John Glenn to describe elements of his flight on 20th February 1962. "The biggest surprise of the flight occurred at dawn ... when I glanced back through the window my initial reaction was that the spacecraft had tumbled and that I could see nothing but stars through the window. I realized, however, that I was still in the normal altitude. The spacecraft was surrounded by luminous particles. These particles were a light yellowish green color. It was as if the spacecraft were moving through a field of fireflies." (10)

While capturing the public imagination to some degree, the UFO phenomenon has never really been taken seriously – at least officially. It is often dismissed as a fascination of the 'lunatic fringe'. It is true that since the end of the Second World War the 'UFO circuit' has played host to information, disinformation, theory and counter theory, all against a supposed backdrop of alleged governmental conspiracy. Yet to 'throw the baby out with the bath water' is to miss out on an intriguing insight into what is taking place on the world stage in the latter half of the Twentieth Century.

Such events are all richly featured in an incident that occurred on 21st June 1947, three days before Kenneth Arnold's 'sighting': An incident that occurred in Puget Sound harbor, between Tacoma and Seattle, Washington State, US.

One Harold A Dahl, his teenage son Charles, two other crewmembers (and the family dog) had been patrolling for salvage logs when they saw "six huge donut shaped objects in the sky." The objects appeared to be about 100 feet in diameter and of a bright metallic appearance.

Dahl ran his boat ashore on Maury Island and started taking photographs of the objects. Five of the six objects were circulating around the sixth which appeared to be in trouble. Then there was an explosion and this sixth vessel fell earthwards. The craft discharged a quantity of metallic residue before seemingly recovering and disappearing with the five other discs. Flakes of similar material to aluminium and some additional material (which resembled cooled lava) fell around the onlookers. Some fragments hit their boat causing damage, one fragment hit Dahl's son and another killed the family dog (16).

Dahl claims he tried to use his radio to call for help but when the objects were overhead the radio would not work. Dahl loaded his boat with some of the fallen debris and went back to Tacoma where his son was treated for burns. (Tacoma itself had been the scene of a strange aerial sighting on 4th February 1908 when a multicolored light was observed by a conductor and many passengers of a train near Tacoma's Fifteenth Street. Later the same week, many multicolored shapes were seen in the sky above Washington State.)

Dahl reported the incident to his 'boss', one Fred L. Crisman, who at first did not believe his tale and reprimanded him for damaging the boat. The next day Dahl was apparently visited by a man wearing the not-yet-then stereotypical black suit and driving a brand-new 1947 Buick sedan. This man had breakfast with Dahl and advised him that "if he loved his family and didn't want anything to happen to his general welfare, he

would not discuss his experience with anyone." But Dahl already had, and Crisman was later out checking Dahl's story by visiting the scene of the alleged incident.

Crisman found the beach covered in slag, estimating nearly 20 tons of the material, and then, one of the strange donut shaped machines swooped out of the clouds towards him. Whatever else occurred, this event convinced Crisman that Dahl had been telling the truth after all.

Crisman wrote to Ray Palmer, then editor of the science fiction magazine 'Amazing Stories' with details of the incident. (Crisman had previously written to Palmer and had a letter published in the June 1946 issue detailing his encounters with his outlandish ideas of 'deros' (detrimental robots) who ran an underground super-civilization.)

Palmer subsequently wrote to Kenneth Arnold (whose friend Colonel Paul Wieland had just returned from Germany as a judge at the Nuremberg trials) and asked him to investigate the story. He gave Arnold \$200 to cover his expenses – no small amount in 1947. Indeed it was such a large amount that Arnold went on to boast about it at the office of the 'Idaho Daily Statesman' whose editor, David Johnson, promptly sent a telegram to Air Force Intelligence to advise them of Arnold's pending investigation (12). (We now know that Johnson was habitually supplying information to the Air Force and other arms of government on a range of matters. His name also appears on the bottom of a document released in 1969 when the Air Force terminated Project Blue Book.)

In the meantime, Dahl had had his photographs developed, but they were unusable with the film being fogged beyond all recognition.

Arnold flew to Tacoma on 29th July in his private plane and took a room at the Winthrop Hotel. He later phoned Dahl, but found him reluctant at first to meet and share details of his story, however he later agreed when Arnold advised him of his own current celebrity status. Dahl repeated his story and told Arnold that since the incident he had had nothing but bad luck; family illness, engine trouble with his boat and loss of salvage income.

Arnold then contacted a friend of his, airline pilot Captain E. J. Smith and asked him to come to Tacoma to contribute his expertise to the mystery.

At 9:30am the following morning, both Dahl and Crisman turned up at Arnold's hotel claiming that someone had tried to destroy their boat. Apparently there had been an object in the sky circling above them an object unrecognizable to Crisman, despite being a former war pilot himself. Arnold then flew off to collect Captain Smith who, after interviewing both Dahl and Crisman, advised Arnold to contact Air Force A-2 (Intelligence) Officer Lieutenant Frank. M. Brown who was stationed at Hamilton Field, California.

Brown made plans to fly to Tacoma with another officer, Captain William Davidson and within an hour of Arnold's initial phone call, both officers were on their way to McChord Field, Washington in a B-25 bomber. (In the 1950s McChord Field itself was to play host to a number of strange aerial sightings. See Appendix II.) Shortly afterwards, United Press wire service reporter Ted Morello contacted Arnold to enquire why the Air Force were flying to Tacoma to see him. The significance here is that the media should not have known about Arnold's investigation.

This became more perplexing as Arnold had already been receiving calls about his

visit at the Winthrop Hotel even though only his wife, Smith, Dahl and Crisman apparently knew he was staying there. These calls were coming from the local newspaper stating they were receiving anonymous phone calls from someone who apparently knew everything that Arnold and Smith were involved in. Arnold began to wonder whether his room had been bugged and, if so, by whom and why.

The two Airforce officers arrived at Arnold's hotel late in the afternoon of 31st July 1947, however Dahl failed to show at the arranged meeting, although Crisman did attend and talked at length about the incident. He showed Brown and Davidson some of the metal and slag he had collected and stated that he would return home to put together a box-load of the debris for the officers to take back to California with them for analysis.

The intelligence officers shared their doubts about the story with Arnold and prepared to leave at 11.30pm just as Crisman returned with the box full of fragments, which they put in the back of their military staff car.

However the two Army Air Corps Officers involved, 1st Lt. Frank M. Brown and Capt. William L Davidson were killed when their B-25 carrying the photographs and some of the alleged UFO residue crashed within a few hours of their departure. The other crew and a passenger, an army enlisted man, bailed out and survived. This man, Master Sergeant Elmer Taff later told Arnold that he had witnessed Brown and Davidson load a large carton onto the plane and fifteen minutes into the flight the left engine had caught fire. The B-25 crashed near Kelso, Washington.

The military cordoned off the site of the crash and banned civilian aviation investigators near the wreck on the grounds that the plane had been carrying classified material at the time of the crash.

Strangely the reporter who covered the story for the 'Tacoma Times', Paul Lance died in "... two weeks ... and the cause of his death was not clear ... he lay on a slab in the morgue for about thirty-six hours while the pathologists apparently hemmed and hawed (13). The eventual conclusion was that he died from meningitis. Then the 'Tacoma Times' a solid publication for over forty years suddenly went out of business (14) following their headline on 1st August 1947 'Sabotage Hinted in Crash of Army Bomber At Kelso.' Certainly Brown's wife Velma was suspicious, stating in a letter to Kenneth Arnold "I have never thought Frank's death was an accident." However there is no available supporting evidence of sabotage.

These 'coincidences' become even more suspicious when linked to the firing of the Ray Palmer, editor of 'Amazing Stories,' the publication that had initiated the Maury Island Investigation. This editor had even increased the magazine's circulation from 80,000 to 130,000, making his sacking even more of a puzzle. (He went on to found 'Fate' magazine with Curtis Fuller and published early accounts of UFO sightings including those of Kenneth Arnold.) Ted Morello, the United Press stringer at Tacoma was also dead within months (15).

Then, on 2nd August 1947 Arnold decided to fly home, however less than 200 feet above the ground, his engine stopped.

It was due to Arnold's skills as an experienced pilot that allowed him to bring the plane down safely. Later inspection revealed that his plane had been sabotaged by some-

one turning off the fuel line valve (16).

Edward J. Ruppelt, who later headed up Project Bluebook in 1951, considered the flying saucer aspect of this story a hoax (17) as did Edward Condon's Scientific Study of Unidentified Flying Objects which was similarly dismissive referring to it as a hoax three times (18).

However the Director of the FBI was not so readily dismissive. In a teletype of 14th August 1947 J. Edgar Hoover stated "It would also appear that Dahl and Crisman did not admit the hoax to army officers..." (19)

FBI Special Agent George Wilcox advised Hoover: "Please be advised that Dahl did not admit to Brown [Army Corps Officer] that his story was a hoax but only stated that if questioned by authorities he was going to say it was a hoax because he did not want any further trouble over the matter." (20) Fred Crisman, himself, not only didn't admit to it being a hoax, but in the January 1950 issue of 'Fate' magazine he called such accusations of a hoax as being a "bare faced lie." (21)

Ray Palmer didn't believe it to be a hoax either. He published the case in FATE, vol. 1. No. 1 in 1948, then in 'The Coming of the Saucers' in 1952 and again in 'The Real UFO Invasion' in 1967. Arnold concluded in 1980 that the incident was not a hoax either and at the First International UFO Congress in Chicago, Arnold discussed the Maury Island incident at length (22).

Following the event, the Army Air Corps Intelligence Officer at Hamilton Field, Lt. Colonel Donald Springer, made the following recommendation in respect of Crisman in a report dated 18th August 1947, "That in view of the reported statements made by Mr. Crisman that consideration be given to revoke his Air Reserve commission and flying status as an undesirable and unreliable officer." (23)

This recommendation was not followed as history records that Crisman served thirty months flying during the Korean War (1950-53) (24).

So what was going on at Maury Island?

The object in the sky was certainly a UFO at the time, but there is no evidence to conclude it was an extraterrestrial one. The slag fragments dropped by the 'UFO' were identified by experts as smelter refuse. Arnold also confirmed the light metal material was only aircraft alloy, however one detail puzzled him. "There was only one unusual thing about this white metal that made us stop and wonder. On one piece that Crisman handed us we could plainly see that two parts of it had been riveted. I had never seen that type of rivet used in aircraft manufacture." The rivet in question was square. All aircraft rivets were round.

Yet at the time, scientists from Germany were entering the US as part of a relocation program (of which more later) bringing with them alternative advanced aircraft designs and technology. As later chapters will detail, the US Navy was at the forefront of developing these craft with the German scientists, craft that appeared to resemble the popular conception of UFOs.

And the Navy certainly had a presence in the area, with a Naval Air Station on Whidbey Island, another station at Everett, a submarine base at Bangor and a Naval shipyard at Puget Sound.

Originally established in 1891 as a Naval Station, this base at Puget Sound built new ships during WWI and following WWII the shipyard was engaged in an extensive program of modernizing carriers. The shipyard itself is located on the west side of Puget Sound, thirty miles from Tacoma and within miles of the McChord Air Force Base.

By 1965, the shippard had been confirmed as having a nuclear capability. It is likely, however, that it had this capability much earlier, for history also records that in Washington State there is one of the oldest nuclear processing facilities in the world. In fact, just one month after Enrico and his team conducted the first controlled nuclear chain reaction, the leaders of the top secret 'Manhattan Project' chose to build the world's first, full scale plutonium production plants near the farming village of Hanford in Southeast Washington.

Thirty months later, Hanford produced the plutonium used for the world's first nuclear detonation. At this Hanford Plant (the 221-B building was the second radiochemical processing facility constructed during WWII), plutonium was manufactured for the Nagasaki 'Fat man' bomb and for many years during the Cold War weapons-grade material was produced there for America's nuclear arsenal.

It is not improbable that the military had been dumping illegal radioactive waste from Hanford facility on Maury Island. (This would also account for Dahl's film being foggy; as radioactivity has this effect on photographic materials) and the burn's on Dahl's son's arm.

It is also now known that Fred Crisman himself was no lowly harbor master nor salvage collector. As Anthony Kimery, publisher and former organized crime investigator in Washington DC commented, Crisman "knew a lot more about the aircraft [witnesses] saw than he admitted – aircraft some intelligence sources believe were hybrids of those designed earlier that decade by Nazi engineers who were brought to the US under Operation Paperclip."

In fact, Crisman both had strong CIA connections and was later indicted for the assassination of President Kennedy, of which more later.

This mixture of German scientists, CIA, FBI, UFOs, sabotage, deception, fantasy and fact make for the delicious but lethal cocktail known as the postwar UFO phenomenon. What is known without doubt, however, is that no one really had any idea what was going on.

Plausible Deniability

Part IV of the Robertson Panel's report concluded, "reasonable explanations could be suggested for most sightings ... By deduction and scientific method it could be induced (given additional data) that other cases might be explained in a similar manner."

The Panel also concluded that there was "no evidence of a direct threat to national security in the objects sighted" and that "the absence of any 'hardware' resulting from UFO sightings lends a 'will-of-the-wisp' nature to the ATIC problem. Although the panel members agreed that there was no evidence of direct threat from the sightings, it also agreed that dangers might be inherent from misidentification of actual enemy artifacts by defence personnel; overloading of emergency reporting channels with 'false' information and subjectivity of public to mass hysteria and greater vulnerability to possible

enemy psychological warfare."

The Robertson Panel therefore recommended the following strategy be adopted to deal with the UFO phenomena. "The 'debunking' aim would result in reduction in public interest in 'flying saucers' which today evokes a strong psychological reaction. This education could be accomplished by mass media such (as) television, motion pictures and popular articles. Basis of such education would be actual case histories which have been puzzling at first but later explained. As is the case of conjuring tricks, there is much less stimulation if the 'secret' is known. Such a program should tend to reduce the current gullibility of the public and consequently their susceptibility to clever hostile propaganda. The panel noted that the general absence of Russian propaganda based on a subject with so many obvious possibilities for exploitation might indicate a possible Russian official policy."

The panel further recommended;

"a) That the national security agencies take immediate steps to strip the Unidentified Flying Objects of the special status they have been given and aura of mystery they have unfortunately acquired.

That the national security agencies institute policies on intelligence, training and public information designed to prepare the material defences and the morale of the country to recognize most promptly and to react most effectively to true indications of hostile intent or action.

We suggest that these aims may be achieved by an integrated program designed to reassure the public of the total lack of evidence of inimical forces behind the phenomena, to train personnel to recognize and reject false indications quickly and effectively, and to strengthen regular channels for the evaluation of prompt reaction to true indications of hostile measures."

This recommendation (paragraph 4a) was accepted and reflected by the subsequent sceptical/debunking attitude towards UFOs since that time.

However, Dr. Allen Hynek, an associate member of the Robertson Panel, expressed criticism of it later, stating: "I was dissatisfied even then with what seemed to me a most cursory examination of the data and the set minds implied by the Panel's lack of curiosity and desire to delve deeper into the subject." (18).

Another of those interviewed by the Robertson panel, was Captain Edward Ruppelt, Chief of ATIC's Aerial Phenomena Branch and later head of Project Blue Book.

He stated that the CIA ordered the Airforce to debunk sightings and discredit witnesses. "We're ordered to hide sightings when possible, but if a strong report does get out, we have to publish a fast explanation – make up something to kill the report in a hurry, and also ridicule the witness, especially if we can't find a plausible answer. We even have to discredit our own pilots." (19).

An example of 'killing the story' occurred on 29th July 1952 when Marine Corps photographer, Ralph C. Mayher, shot 40 feet of 16mm film of a bright object streaking over Miami in Florida, USA. Mayher contacted the Marine Air Station and later met with a Lt. Aldridge who left with the roll of film who took it to the Air Force for analysis. When Mayher later made enquiries he received a letter dated 13th April 1954 which stated

"This is to advise you that a search of the ATIC files has failed to show that the Air Force has ever received the film you mentioned. It is our belief that since this film was originally submitted to a Naval Base, it must still remain with Naval Intelligence." (20). 1st Lt. R. C. White signed the letter.

Mayher then contacted the Marine Corps Air Station in Miami where he was stationed as a service photographer the night he took the film of the bright object in the sky. He received a reply dated 19th April 1954 which stated "Saucer film turned over to Air Force, July 31, 1952." (21). Colonel T. G. Ennis, Commanding Officer of the air station, sent the telegram.

Ruppelt had long since tired of official denial of the UFO phenomenon, and in his 1956 book, 'The Report on Unidentified Flying Objects,' he scorned the ongoing quest for proof asking, "Does a UFO have to land at the river entrance to the Pentagon near the Joint Chief of Staffs' Office? Or is it proof when a ground radar station detects a UFO, sends a jet to intercept it, the pilot sees it, and locks on with his radar, only to have the UFO streak away at a phenomenal speed. Is it proof when a jet pilot fires at a UFO and sticks to his story even under the threat of court martial." (22).

Dr. David R. Saunders, a member of the 1960s University of Colorado's UFO Committee (Condon Report) also believed the Robertson Panel Report was no more than a cover story "conceived and executed for the dual purposes of confusing foreign intelligence and reassuring the cadre of our own establishment. There is ample precedent for the use of such double and triple layers of security in connection with really important projects. For example the mere existence of the Manhattan Project was a secret, but the nature and importance of that project was an even bigger secret." (23).

Despite the Robertson Panel's attempts to kill off the speculation, the matter could hardly rest as sightings of UFOs continued, with a hard core of UFO believers insisting that the entire phenomenon was being covered up. The agencies themselves certainly didn't help when trying to cast off this tag of a cover-up as a couple of well-publicized incidents in the 1950s demonstrate.

The first incident was triggered in 1955 when two elderly Chicago sisters, Mildred and Marie Maier, reported in the 'Journal of Space Flight' that they had tape recorded what appeared to be a radio signal from a 'flying saucer.' It wasn't, or at least, it probably wasn't.

The OSI section of the CIA became interested and requested that the Scientific Contact Branch make further enquiries into the claims (24). Field officers from the Contact Division (created to collect foreign intelligence information from sources within the US) made contact with the sisters, however on examination of the tape it became apparent that the strange noises were nothing more than Morse code from a US radio station (25).

That really should have been the end of a rather innocuous incident that served little more than to add excitement to the lives of the Maier sisters who were reportedly "thrilled that the government was interested" in their story.

Yet the story did not end there, for an interested researcher, Leon Davidson, talked to the Maier sisters in 1957 about the episode. They advised him that one of the men they had talked to a Mr [Dewelt] Walker who claimed he was from the US Air Force.

Davidson then wrote to Walker, believing him to be a US Air Force Intelligence Officer from the now familiar Wright-Patterson Air Force Base and asked if the tape had been analyzed at the ATIC. Walker duly replied that the tape had been forwarded to the proper authorities for evaluation however no results had been forthcoming.

Davidson began to suspect that Walker was actually a CIA officer and wrote to DCI Allen Dulles requesting information on what the tape had revealed and who Dewelt Walker actually was (26). The agency, wanting to keep Walker's identity as a CIA agent a secret, replied that another agency within the government had analyzed the tape and he would be hearing from the Air Force in due course (27). Sure enough, a few months later on 5th August, the Air Force informed Davidson that Walker "was and is an Air Force Officer" and that the tape "was analyzed by another government organization." The Air Force letter also confirmed that the signal recorded by the sisters was merely Morse code (28).

Davidson started to turn the screws when he wrote back to Dulles wanting to know the identity of the Morse operator and of the agency that had conducted the analysis. This left both the CIA and the Air Force in an impossible position. The CIA had already denied analyzing the tape, but then by this time the Air Force had as well. From this it was only possible to conclude this "other government organization" was some clandestine agency at work behind the scenes.

A CIA officer, under cover and wearing Air Force uniform, then contacted Davidson, tried to reassure him that there was no clandestine agency, and that the problem was that the Air Force had a policy that they were not in a position to disclose who was doing what. Davidson, however, continued to press for answers to his questions. Digging themselves deeper into a hole, the CIA officer then tried to claim that after a thorough check of records, the tape and notes made at the time had been destroyed to conserve file space on the grounds that the recording was known to be of US origin (29).

This was more than Davidson could stand and he accused the officer and his agency "whichever it was" of "acting like Jimmy Hoffa and the Teamster Union in destroying records which might indict them (30)."

So how did the CIA respond this time? They didn't, merely drawing a veil of silence over the matter by declaring that any more contact with Davidson would only encourage more speculation and that they would not respond to any further communications with him again (31).

Events of the night of 22nd January 1958 added to the growing perception of a coverup. On that evening, CBS Television presented a program devoted to UFOs on its 'Armstrong Circle Theater' show. Major Donald Keyhoe, Director of NICAP (National Investigations Committee on Aerial Phenomena), was invited on to the show given his sources of information from within military circles. Keyhoe was a graduate of the US Naval Academy and a former Marine Corps pilot. He was also renowned for his frequently stated view that the US Government was withholding the facts on UFOs in order to avoid widespread panic.

Several Air Force spokesmen were also due to appear on the program, however they would only agree to do so if they were allowed to see Keyhoe's script in advance

along with an assurance that he would not deviate from it during the program. Keyhoe duly forwarded his script, only to have it returned with most of the points he wanted to make removed. Even the statement Keyhoe retained was later forbidden from being aired.

There is an official policy, believed in the best interests of the people, not to confirm the existence of UFOs until all the answers are known. Captain Edward J. Ruppelt, former chief of Project Blue Book, has confirmed the existence of four important documents that should be noted.

"In 1948, in a 'Top Secret' estimate, the [Air Technical Intelligence Center] concluded that UFOs were interplanetary spaceships. In 1952, an Air Force Intelligence analysis of UFO maneuvers brought the same conclusion... interplanetary. In January 1953 a report by a panel of top scientists at the Pentagon reached this conclusion: There is strong circumstantial evidence, but no concrete proof that UFOs are spaceships." (32).

The show did go ahead, but was not exactly the program originally planned. After the Air Force spokesmen had reeled off a number of anecdotal stories designed to ridicule the UFO belief, Keyhoe came on for his agreed piece. However, after a few moments, he suddenly veered from the script on the teleprompter and managed to squeeze in "and now I'm going to reveal something that has never been disclosed before... for the last six months we have been working with a congressional committee investigating official secrecy about UFOs..." before the audio was cut, taking Keyhoe off air. The public never heard his planned concluding statement that "if all the evidence we have given this committee is made public in open hearings it will absolutely prove that the UFOs are real machines under intelligent control. (33)"

NICAP later received a statement from the CBS Director of Editing, Herbert A Carlborg, confirming that Keyhoe was cut off the air, but only in the interests of national security. "This program had been carefully screened for security reasons," Carlborg wrote, "therefore it was the responsibility of this network to ensure performance that was in accordance with predetermined security standards. Any indication that there would be a deviation from the script might lead to a statement that neither this network nor the individuals on the program were authorized to release." (34).

However, the damage had been done, and the idea of a cover-up began to be securely planted in the minds of those who wanted to believe in it and others who had been more ambivalent up to that time.

Slowly, those involved in the alleged cover-up started to 'leak' information. Former CIA Director (1947-50) Vice Admiral Roscoe Hillenkoetter decided to go public when he made the following signed statement to Congress dated 22nd August 1960:

"It is time for the truth to be brought out ... behind the scenes high ranking Air Force officers are soberly concerned about the UFOs.

But through official secrecy and ridicule, many citizens are led to believe that unknown flying objects are nonsense ... I urge immediate Congressional action to reduce the dangers from secrecy about unidentified flying objects (35)."

Victor Marchetti, a former Special Assistant to the Executive Director of the CIA also acknowledged the phenomenon was real in an article written for Second Look entitled

'How the CIA Views the UFO Phenomenon.' In this article Marchetti states "We have, indeed, been contacted – perhaps even visited – by extraterrestrial beings, and the US government, in collusion with other national powers of the Earth, is determined to keep this information from the general public (36)."

Colonel Joseph J. Bryan III, founder and first chief of the CIA's Psychological Unit and former Special Assistant to the Secretary of the Air Force as well as aviation advisor to NATO, confirmed that information was being covered up in a letter to Donald Keyhoe dated 1960. "Information on UFOs, including sightings reports, has been and is still being officially withheld. This policy is dangerous, especially since mistaken identification of UFOs as a secret Russian attack might accidentally set off war (37)."

That the CIA does not hold a good track record on honesty and integrity is a matter of public record. Captain George Hunter White, a Narcotics agent, wrote of his CIA escapades in a letter to Dr. Sidney Gottlieb. "I toiled wholeheartedly in the vineyards because it was fun, fun, fun... where else could a red-blooded American boy lie, kill, cheat, steal, rape and pillage with the sanction and blessing of the all-highest?" (White ran 'Operation Midnight Climax' - a project run in the 1950s in cooperation with the CIA and the Army Chemical Corps, wherein unsuspecting male bar patrons in New York and San Francisco were given cocktails spiked with LSD, and thereafter taken by prostitutes to designated hotel rooms with their sexual acts filmed by U.S. intelligence agents from behind a two-way mirror.)

A retired agency caseworker with twenty years experience stated of his work, "I never gave a thought to legality or morality. Frankly I did what worked."

William (Wild Bill) Donovan, President Roosevelt's Coordinator of Information (Appointed 11 July 1941 by Roosevelt to this post, and later as Director of Strategic Services, 13 June 1942. Placed on active duty and appointed Brigadier General in US Army, 24 March 1943; Promoted to Major General, 10 November 1944), recruited a Cornell graduate from Boston named Stanley Lovell. Lovell described his work as follows: "What I have to do is to stimulate the Peck's Bad Boy beneath the surface of every American scientist and say to him, 'throw all your normal law-abiding concepts out of the window. Here's a chance to raise merry hell. Come help me raise it (38)."

Even President Truman went on record as stating about his own creation: "I think that it was a mistake. And if I'd known what was going to happen, I never would have done it ... but it got out of hand ... now as nearly as I can make out, those fellows in the CIA don't just report on wars and the like, they go out and make their own and there is nobody to keep track of what they are up to. They spend billions of dollars on stirring up trouble so they will have something to report on. They've become ... it's become a government of all its own and all secret. They just don't have to report to anybody ... The people have got a right to know what those birds are up to. ... You've got to keep an eye on the military at all times, and it doesn't matter whether it's birds in the Pentagon or the birds in the CIA (39)."

The CIA has also been linked to a number of incidents that indicate that involvement in the UFO phenomenon is a risky and unhealthy business. Consider the case of the late Dr. Morris K. Jessup, a professional astronomer and author of books on UFOs who suggested that there were UFO bases under the oceans. On 20th April 1959 he was found

dead, having apparently committed suicide.

Then there was Dr. James E. McDonald, a senior physicist at the Institute of Atmospheric Physics and Professor at the Department of Meteorology, University of California. He became a speaker and writer on the subject of UFOs and was noted to be critical of the US Air Force's handling of the situation. In an article in Saga Magazine (40) it was claimed that McDonald "privately discussed, in his last years, the possibility that alien beings were not only present on this planet but were systematically taking over top posts in the government and military."

On 13th June 1971, McDonald's body was found in the desert north of Tucson, Arizona, he having allegedly committed suicide.

Then there was Professor René Hardy, a world-renowned scientist and inventor with over 250 patents to his name in the fields of electronics, radio, television, ultrasonics and optics. His interests included Ufology and interstellar navigation.

On 12th June 1972, the Professor was found dead with a bullet in his head, and a revolver in his hand just two days, it is claimed, before he was to announce an important announcement in the field of space phenomenon (41). At his funeral, six tall men attended that no one appeared to know and although photographs were taken of all present, these six men did not appear in the photographs (42). (Being an astronaut has also proved dangerous, with an incredibly high figure 11% of all astronauts that had worked for NASA being dead as of 31st March 1997 (43).)

Events at Maury Island also give us a clue to CIA involvement in the UFO phenomenon. Indeed the incident's critical player, Fred Crisman had a mysterious background. It is believed that he worked for the OSS (the forerunner to the CIA) during the Second World War (40). He was also a veteran of Operation Paperclip of which more later.

Intelligence sources also confirm that he was a member of a secret fraternity of former intelligence officials (AFIO). Other sources claim that he was involved in gunrunning and had strong links with organized crime; two activities which held a mutually inclusive relationship at the time.

According to FBI records on Crisman, disclosed under the Freedom of Information Act and on file at the Assassination Archives & Research Centre (AAC) in Washington, D.C., Crisman was a Captain in the Army Air Corps and had seen active service during the Second World War. From 20th March 1946 to 31st March 1947 he was employed as a 'special investigator' on veteran's matters for the State of Washington.

At some point between 31st March 1947 and 21st August 1947, Crisman was either appointed as a Harbor Patrol worker, or more likely as there are no records of him in this position (although this is not to say he didn't hold that job) he collected and sold salvage.

Crisman's activities can then be traced to 21st August 1947 when the FBI carried out a security check on him for an unspecified position with the Atomic Energy Commission – although Crisman never took up the post, according to the files. (Note: There was an alleged UFO crash on the Mexican side of the Texas/Mexican border on 6th December 1950. The object hit the ground at such high speed that very little wreckage could be found but what was found was taken to the Atomic Energy Commission.)

His life then became something of a confusing puzzle. He was involved in a govern-

ment program helping gypsies, and it is interesting to note that some of the scientists brought to the US under Operation Paperclip had used gypsies for experimentation. (See also the report that homeless persons and others were used in time-shifting experiments at Montauk). He was later listed as the president of a car lot and an official of at least half a dozen companies that could not be traced to any given addresses; he held a right-wing talk radio show on KAYE Radio in Puyallup, WA, under the pseudonym Jon Gold (the same name he used to write a semi-autobiography novel 'Murder of a City'). He is recorded as having been an industrial psychologist for Boeing and he was a bishop in the 'Universal Life Church', a shady organization which seems to have had ties with the CIA, and whose members included old Bay of Pigs veterans such as David Ferrie. (Jim Garrison, District Attorney of New Orleans, believed this 'church' and others was merely a front for the CIA, a theme he expanded upon in a memo he wrote to Jonathon Blackmer, an investigator for the select House Committee in the 1970s into Kennedy's assassination.)

In 1968, Garrison, subpoenaed Fred Crisman for his investigation into President Kennedy's death. Garrison strongly believed that Crisman was connected in some crucial way to the men Garrison was trying to indict for Kennedy's assassination.

This subpoena identified Crisman as a radio announcer in Tacoma and its associated press release stated "Our information indicates that since the early 1960s [Crisman] has made many trips to the New Orleans and Dallas areas in connection with his undercover work for that part of the warfare industry engaged in the manufacture of what is termed, in military language, a 'hardware' – meaning those weapons sold to the US Government that are uniquely large and expensive (45)."

When Gary Cornwell, Bob Buras and Mike Ewing for the Select Committee on Assassinations interviewed Garrison on 11th August 1978 at his office at the Federal Courthouse in New Orleans, Garrison stated that he viewed Crisman as an important figure, who he would like to investigate further. He stated that Crisman had apparent CIA connections, as well as important right wing connections – and money.

Crisman was later interviewed for four hours by Garrison's team. In the 95th Congress at the hearings into select committee on assassinations it was suggested that Crisman was one of the three tramps at Dealy Plaza (46).

Garrison later recorded his conclusions about Crisman in a lengthy handwritten memo to Blackmer. "I suggest the only reasonable conclusion is that he was (and probably is, if still around) [he wasn't, having died on 10th December 1975], an operative at a deep cover level in a long-range, clandestine, intelligence mission directly (in terms of our national intelligence paranoia) related to maintaining national security... Crisman emerges as an operative at a supervisory level ... acquired by the apparatus to carry out the menial jobs that are needed to push a current mission forward, a middle man - in the final analysis – between the mechanics who eliminate, and the handy men, who otherwise support a termination mission, on one hand, and the distant, far removed, deep submerged command level on the other."

Operation Paperclip did not become public knowledge until 1973, but Garrison almost compromised it when he arrested a contact of Crisman's, Clay Shaw, on charges of conspiracy to murder President Kennedy. Major Clay Shaw, formerly of the OSS (the

forerunner of the CIA), the spy who went on to become general manager of New Orleans's International Trade Mart, an import-export concern with a number of former European war criminals on its board of Directors.

Shaw, who after the Second World War rose to deputy chief of staff at a detainment camp for Nazi POWs, met Werner von Braun after von Braun abandoned Peenemunde and travelled south to join the American forces in Germany close to the French border. Clay maintained his relationship with von Braun over the years through their mutual connection with the 'Defence Industrial Security Command' (DISC), an operational arm of the counterespionage division of the FBI and his involvement in Operation Paperclip.

At Shaw's trial, Garrison was unable to provide clear evidence that he had ties to the CIA, and also had his star witness, David Ferrie found dead just before he was to testify. Shaw was subsequently acquitted on 1st March 1969 by a Grand Jury. He died on 14th August 1974, in what Garrison considered mysterious circumstances.

Documents that became available in 1977 confirmed that Shaw had worked for the CIA since 1949. He had also been in business with former Nazis and European fascists involved in several CIA-supported covert operations throughout Europe. As noted above, there is strong evidence that he had been a member of the OSS, and he certainly worked for a senior OSS officer who was involved in Operation Paperclip.

It appears that Crisman and Shaw knew each other well. Certainly that is what Garrison believed. One of Garrison's informants stated that Crisman was "the first person Clay called after being told he was in trouble." The same source claimed that Crisman "flies to New Orleans steadily. 1964, eleven times. 1965, 17 times, 1966, 32 times, 1967, 24 times ... he seems to have no income and certainly spends a large sum of money on air travel."

It seems remarkable that a man who was working for the forerunner of the CIA, then a special investigator for the State of Washington, reduced to scavenging for salvage, then was almost employed by the Atomic Energy Commission (which had covert UFO connections), before becoming involved in other covert CIA activities, and later being seen as having a role in the assassination of President Kennedy, could have been an innocent bystander to the alleged UFO incident at Maury Island. More likely he used his information regarding Paperclip to get back into the covert intelligence operation. It is likely that it was Crisman who was contacting the press to alert them to Arnold's presence and the nature of his enquiries.

UFOs continued to be reported throughout this period. Then, during the first three nights of August 1965, literally millions of people in Texas, Oklahoma, Kansas, Nebraska, Colorado, Wyoming and neighboring states witnessed one of the most spectacular wave of UFO sightings ever recorded (47).

These events were not only observed in the sky, but were also tracked by radar and witnessed by jet liners. Of course the official debunking strategy was swiftly set in place: the sightings were merely "four stars in the constellation of Orion (48)." Unfortunately, this explanation was cobbled together too hastily for, as astronomers pointed out, Orion was not actually visible at that time in the Western Hemisphere. Oh.

Then the lights went out over an area of 80,000 square miles, followed by another

blackout on 9th November 1965 termed the 'Great Northeast Blackout.' UFOs had already been reported that night over Niagara, Syracuse and Manhattan, and it was subsequently muted that this activity might have tripped the relay at the Ontario Hydro Commission (49).

In January 1966, the USAF continued to make expensive credibility mistakes. There had been a sighting of a UFO over Wanaque Reservoir in New Jersey. "A special Helicopter with a bright light on it" explained the Air Force. "A special helicopter with a bright light on it?" challenged the press. "No." The Air Force admitted, actually there hadn't been any helicopter – let alone one with a bright light on it - in the Wanaque area that night (50).

The Air Force's credibility continued to slump, with increasingly obscure explanations being offered for reported incidents. On one occasion on 25th March 1966 a truck driver, Frank Mannor, and his family witnessed seeing an object with pulsating lights hovering over a swamp behind their house. Patrolman Robert Hunawill arrived at the scene and confirmed that a "strange lighted object" hovered over his patrol car before joining three other "objects" moving across the swamp (51). The object was then observed by 52 independent witnesses, including a dozen police officers.

Project Blue Book sent in its top scientific advisor, Dr. J. Allen Hynek, to investigate. "Its swamp gas [known as 'foxfire']" he declared. Mannor retorted "I'm just a simple fellow, but I seen what I seen and nobody's going to tell me different. That wasn't no old foxfire or hulla-billusion. It was an object (52)." (Hynek later stated that this contrived explanation marked the lowest point in his career.)

This episode fuelled growing concern at all levels that the Air Force and the CIA were conspiring to conceal the truth about UFOs from the American public. One of Michigan's state representatives in Congress, minority leader Gerald Ford, later to become President on the impeachment of Richard Nixon, returned to Washington in March 1966 and demanded a 'full-blown' congressional investigation of events. The 'Christian Science Monitor', a journal with no previous involvement in the UFO phenomena considered that the Michigan sightings had "deepened the mystery" of UFOs and it was "time for the scientific community to conduct a thorough and objective study of the 'unexplainable'".

By this time in 1966, President Johnson's administration was suffering its own credibility gap. Air Force Secretary Dr. Harold Brown and Defence Secretary Robert McNamara discussed the growing problem and decided that an independent university-conducted study could be undertaken publicly and such a course of action would get everyone off the hook. And Dr. Edward Uhler Condon was considered the perfect man for the job.

Condon, a former director of the National Bureau of Standards, had gained an impressive scientific reputation with a long association with military research projects. During the Second World War, he had served on Dr. Lyman J. Brigg's top-secret S-1 Committee out of which the Manhattan Project developed (53). (Manhattan was the project to develop the world's first atomic bomb.) As writer, psychologist and original member of the Condon Committee, Dr. David Saunders commented:

"The public and the press knew him as one of the pioneers of experimental physics in the Unites States and as a key figure in the development of radar, the atomic bomb, and the nose cone and heat shield used on the Mercury and Gemini manned space capsules. But they knew him even better as an outspoken critic of the federal government. His almost legendary battle with the House Un-American Activities Committee during the McCarthy era and his accusations in 1958 that the government was suppressing the truth about radioactive poisons had labelled him as a scientist who spoke the public's language (54)."

Condon was later to advise 'Sigma XI', an honorary scientific fraternity that he "recommended that the government get out of this business ... there's nothing in it (55)." However, this unequivocal statement was not all it seemed, for Condon went on "But I'm not supposed to reach that conclusion for another year (56)." He had made the statement before the committee's work had even really begun.

ON 20th February 1967, Condon, together with Dr. Richard Low, Dr. David Saunders, Dr. William Price and Dr. Rachford visited the CIA's 'National Photographic Interpretation Centre' (NPIC) as part of their 'investigation'. The CIA were clearly rattled by the possibility of any exposure of their UFO activities as revealed in this CIA memo dated 23rd February 1967:

"Any work performed by NPIC to assist Dr. Condon in his investigation will not be identified as work accomplished by the CIA. Dr. Condon was advised by Mr. Lundahl [NPIC Director] to make no reference to CIA in regard to his work effort. Dr. Condon stated that if he felt it necessary to obtain an official CIA comment he would make a separate distinct entry into CIA not related to contacts he has with NPIC (57)."

After the Condon Committee had concluded its work, Condon asked UFO researcher Dr. James Harder, what he would do if he were responsible for a project report that might conclude that UFOs really were a manifestation of extraterrestrial intelligence as many believed. Harder replied:

"I said that I thought there would be other issues than the scientific ones, notably international repercussions and national security. He smiled the smile of a man who sees his own opinions reflected in the opinions of others and said that he had given the matter much thought, and had decided that if the answer was to be a positive finding of ETH [Extraterrestrial hypothesis], he would not make his finding, but would take the report, in his briefcase, to the President's Science Advisor, and have the decision made in Washington (58)."

Whatever Condon privately believed, when the voluminous report was published in 1968, it concluded, "Our general conclusion is that nothing has come from the study of UFOs in the past 21 years that has added to scientific knowledge. Careful consideration of the record as it is available to us leads us to conclude that further extensive study of UFOs probably cannot be justified in the expectation that science will be advanced thereby (59)."

This conclusion was on page one of the report and provided the soundbites for subsequent media coverage – after all, having read that unexciting conclusion, who would spend time ploughing through another 964 pages? The spin doctoring of the release of

the report was award winning. It was released to the press on 8th January 1969 shortly before Richard Nixon's presidential inauguration, for release the following day. Faced with the almost impossible task of digesting the massive report overnight, reporters asked for a summary and were referred to the above conclusion. It was therefore this conclusion that hit the deadlines and headlines.

However, the report has become a work of controversy. Even during negotiations to establish the committee at the University of Colorado, Robert Low, an academic Dean who was to coordinate the project for the university, was expressing concern that the association between UFOs and the university might lay it open to ridicule. Indeed, the Universities of North Carolina, University of California and Harvard had all declined to undertake the study for this very reason.

Low, however, had a proposal on how the university might take on the task but maintain respectability within the academic world. "The trick would be, I think, to describe the project so that to the public, it would appear a totally objective study, but to the scientific community, would present the image of a group of nonbelievers trying their best to be objective, but having an almost zero expectation of finding a saucer (60)."

Unfortunately for Low, this letter was found by a member of the Colorado Project, David Saunders, and published. He and another member of the group were subsequently fired. Saunders, however, exacted his revenge by publishing his own book entitled somewhat scathingly, 'UFOs? Yes! Where the Condon Committee Went Wrong'. Saunders stated that Condon's conclusion and summary were not the findings of the committee but of Condon's own preexisting beliefs. Saunders pointed out that the actual report concluded that a massive 30% of the ninety-one cases the Condon committee analyzed remained unsolved.

The objectivity of Condon and his study was under fire even before the official report was completed. On 29th July 1968 the US House Committee on Science and Astronautics held a symposium on UFOs. Congressman William Ryan, used the forum to launch an attack on Condon and he demanded a full investigation of the entire Colorado Project (61).

Dr. J. Allen Hynek and Dr. J. McDonald (the latter who, as noted above, was later found dead in suspicious circumstances) also expressed their dissent of Condon, however these voices of dissent went unheard. On 17th December 1969, the then Secretary of the Air Force, Robert C. Seamans, Jr, announced that the Air Force was pulling out of the study of UFOs and that Project Blue Book was being terminated as it could no longer be justified "on the grounds of national security or in the interest of science (62)."

The US Air Force was finally officially out of the UFO business and no longer had to embarrass itself by explaining away both false and perhaps real UFO encounters.

That there was some form of cover-up going on is supported by corroborative evidence from around the world. In England in 1989 the editor of the 'Heywood Advertiser' revealed that following his investigations into a 1957 'sighting' in Wardle, Lancashire, his newspaper was effectively silenced. "We went into [the case] very thoroughly indeed and, no matter what, continued to report the pros and cons of the debate for several weeks. That all came to an end when the very top man from the Ministry of Defence

called at our office personally, took us into a private back room and read the Official Secrets Act to us, with the warning to discontinue reporting further on that strange occurrence (63)."

When asked at a public meeting in 1963 why the British Government was trying to 'hush up sightings of flying saucers' the former Minister of Defence, 1959-62), Harold Watkinson, replied "Before I left the ministry I had to sign a large number of papers promising never to reveal certain facts I had learned as Minister of Defence. The subject of flying saucers may be included (64)."

Timothy Good details an incident that occurred in the early hours of 6th November 1967 on a section of the then A338 road between Avon and Sopley, Hampshire. Driver, Karl Farlow, found that the lights on his diesel truck had suddenly failed. He pulled the truck up and noticed a glowing egg shaped UFO some 15 feet wide which moved slowly across the road from the right, moved slowly to the left, then accelerated and disappeared. Shortly before the object disappeared, a Jaguar car approached from the opposite direction and its lights similarly failed, along with its engine.

After the incident the driver of the Jaguar suggested they contact the local police who duly arrived. "Mr Farlow was very frightened," Constable Roy Nineham commented. "The most startling part of his report is that his lights failed and came on again when the object he saw disappeared." The witnesses noticed that there were marks on the ground beside the road and that part of the road's surface appeared to have melted. The police escorted Farlow and the other driver to Bournemouth police station where they were interviewed until 04:30hrs.

The following day a man from the Ministry of Defence interviewed them again at Christchurch police station. Later that day Farlow was taken back to the site of the incident by the police in order to collect his belongings from his truck. On arrival he noted a group of people investigating the site with instruments, a bulldozer levelling the ground, and a man repainting the telephone booth from which the driver of the Jaguar had contacted the police. A week later, Farlow returned to find that a 200-foot stretch of the road had been completely resurfaced as if to cover all traces of evidence (65).

Following a UFO sighting that was reported in a local newspaper in the late summer of 1974, three of the four witnesses were visited one evening by someone purporting to be a 'man from the Government.' One of the interviewees reported "We were interviewed at length separately [and] were shown different drawings of various types of UFOs... all the paper work was printed and not typewritten ... the papers certainly had codes which didn't mean anything to either of us.

We were then told we had seen a UFO. But should not tell or inform the [national] media. He then produced three documents and we each signed saying that we would not. He then put his papers in a black case ... I would prefer if my name was left out of it, as I fear reprisal after signing the document (66)."

Good also recounts an interview undertaken in 1981 with a man who claimed to have been working at Heathrow Air Traffic Control in September 1966 when a UFO was allegedly observed early in the morning. Good reports that "all personnel in the control tower saw the object hovering at a low altitude above the airport, at a time when there were no

aircraft movements. The UFO was tracked on radar and its speed at departure was clocked at 3000mph. The Ministry of Defence was notified, and investigators allegedly arrived on the scene and told the witnesses that they had 'seen nothing', threatening them with charges under the Official Secrets Act if they revealed the sighting publicly (67)."

Events in the former Soviet Union are equally intriguing. On 18th October 1967 the first meeting of the UFO section of the All-Union Committee on Cosmonautics of the DOSAAF (All-Union Voluntary Society for Cooperation with Army, Navy and Air Force) took place and was attended by 400 people. Of these 400, there was a cosmonaut, eighteen scientists and astronomers and 200 qualified observers stationed throughout the country (68).

Retired Soviet Air Force Major-General Porfiri Stolyarov was elected as Chair of the Committee. On learning that there appeared to be numerous top-secret official reports on the UFO phenomena, Stolyarov requested that the Soviet Air Ministry grant the group access to them. He was advised that he could have this access but first had to get the group up and running, however, was then denied access to the reports on the grounds that "this is too big a matter and you [Stolyarov] are too small (69)."

On 10th November 1967 Stolyarov and the deputy Chair, Dr. Felix Zigel, appeared on Moscow Central Television to announce the formation of the committee. They concluded by stating "Unidentified Flying Objects are a very serious subject which we must study fully. We appeal to all viewers to send us details of any observations of strange craft seen over the territories of the Soviet Union. This is a serious challenge to science, and we need the help of all Soviet citizens (70)."

None of this appears remarkable, however, subsequent events suggest a sudden change of heart of the Russian authorities. Within a few days of the broadcast the committee met with a flood of letters from the public. Within six weeks, the DOSAAF Central Section of the All-Union Committee of Cosmonautics, chaired by Army General A. L. Getman, adopted and passed a resolution on the dissolution of the UFO Section. None of the members of that Section were invited to the meeting, nor were they ever informed why the decision had been taken (71).

A journalist with the Daily Telegraph, John Miller, attempted to talk to Stolyarov about these events and visited the committee's office in the Central House of Aviation and Cosmonautics in Moscow to that end. A secretary advised Miller that Stolyarov was out, however, an appointment was made for the following day. When Miller duly returned at the agreed time, there was no general, no secretary and the office was completely bare. Miller questioned a Soviet official working in the building about Stolyarov and the committee but was met with a blank "you are imagining things, comrade. Everybody knows that UFOs do not exist (72)."

Such walls of silence are not limited to the former Soviet Union. Nick Pope, former head of Sec(AS)2a, the British Ministry of Defence's UFO investigative arm, tried to make contact with his opposite number in the United States while in charge of the Department. "I went through the embassies, which is the usual way to make a 'government-to-government' approach. I contacted the British Embassy in Washington DC and asked them on my behalf to establish contact with my opposite number... the answer came back that since Blue Book had shut down in 1969 "there was no official interest."

Some people will treat that remark with scepticism. I was certainly astonished and very surprised. I didn't accept the answer and attacked the problem the other way round. So I made enquiries with the American Embassy in London. I felt that it was so unlikely that in the whole USA that no one would be 'doing my job' so to speak. I believed that they did not look in the right places. The same answer was relayed from the Embassy – 'no opposite number in the USA.' (73)"

So what was behind this cover-up? Its roots were probably reflected in the conclusions of the Brookings Report. This report was commissioned by NASA in 1960. It stated that if intelligent or semi-intelligent life were to be discovered in the next twenty years (from 1960) then it would probably be by radio communication (16 years later man, himself, started broadcasting into space).

The report also acknowledged that evidence of an alien presence might "be found in artifacts found on the moon or other planets."

The report noted that discovery of intelligent life elsewhere could cause civilizations on Earth to collapse, "societies sure of their own place have disintegrated when confronted by a superior society, and others have survived even though changed." The report therefore recommended that the World prepare itself mentally for the discovery of life on other planets. How could it do that? Well what better way than leakage of information and disinformation over a period of time. Perhaps exactly as has been witnessed.

The views expressed in Brooking reflected those of the CIA. As a former official stated: "Government admission that there are beings from outer space could erode the foundations of earth's traditional power structure. Political and legal systems, religions, economic and social institutions could all soon become meaningless in the minds of the public. Civilization as we now know it could collapse into anarchy. Such extreme conclusions are not necessarily valid, but they probably accurately reflect the fears of the ruling classes of the major nations (74)."

So how have the US authorities managed to maintain such secrecy? Undoubtedly one of the ways has been use of the "oath upon inadvertent exposure to classified security data or information which reads as follows:

"I fully understand that my inadvertent exposure to classified security data or information relating to the United States subjects me to the provisions of Title 18, sections 793-798 of the United States Code, inclusive, and, if I am subject to military jurisdiction, provisions of the Uniform Code of Military Justice. I am aware that the punishment for certain of the above references statutes can be imprisonment for any term of years or for life.

"I do therefore solemnly swear or affirm that I shall never divulge, publish, or reveal, either by word, conduct or any other means, the content or substance of the classified security data or information of which I have become aware. Only written official notice of specific authorization will release me from this obligation.

"I further understand that no change in my assignment, employment, residence or citizenship will ever release me of my responsibilities under this oath, except as defined above."

As James Goodall of the 133rd Airlift Wing points out, "when you go to work at these

locations, you sign away your constitutional rights. You sign a piece of paper saying that if you violate your security agreement and you discuss programs that you are working on; without trial, without right of appeal, you're going to go to [a] Federal Penitentiary for 20 years. That's a real big incentive to keep your mouth shut (75)."

A clue to exactly what people had to keep their mouth shut about was provided by former astronaut Edgar Mitchell when he appeared on the Oprah Winfrey show in 1991 along with a number of other Apollo astronauts. He stated then, "I do believe that there is a lot more known about extraterrestrial investigation than is available to the public right now [and] has been for a long time." When asked to expand upon this he stated "It's a long, long story. It goes back to World War II when all of that happened, and [it is] highly classified stuff (76)."

Highly classified, but intriguing insofar as it uncovers a different slant to our real postwar history.

